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SOMBART[1] AND GERMAN (NATIONAL) SOCIALISM

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THE death of Werner Sombart[2] closes the career of a man of whom it may be said, as it was of the philosopher Fichte, "his life was the life of a nation."

Born at Emersleben am Harz, January 19, 1863, Sombart was four years old when Ferdinand Lassalle inaugurated the German labor movement with the founding of the Universal German Workingmen's Association. He was eight when the century-old dream of an empire of German states under Prussian hegemony was realized on the defeat of France in 1870. He was in his fourteenth year when Bismarck, the Iron Chancellor, ushered in state socialism. In 1882, when he entered the University of Berlin, the leadership of Marx had been virtually established in the German socialist movement. In his youth he witnessed the transformation of revolutionary Marxism into social reform and the

[1] This essay is a continuation of the author's earlier research in the field of institutional economics (see, e.g., "Types of Institutionalism," *Journal of Political Economy*, December, 1932; "Economic Evolution: Dialectical and Darwinian," *ibid.*, February, 1934; and "Pure Capitalism and the Disappearance of the Middle Class," *ibid.*, June, 1939). The research has been aided at various stages by grants from the John Simon Guggenheim Foundation, the Julius Rosenwald Fund, and the Social Science Research Council.

[2] Obituary and editorial, *New York Times*, May 20 and 22, 1941.

rise of the Socialist party as a force in the German Reichstag. In middle age he saw the defeat of German militarism in the first World War and the collapse of the Weimar Republic, Germany's first democratic government. Finally, he lived to see the emergence of naziism, the rebuilding of the German military machine, and the establishment of Hitler's dictatorship. In brief, his life began at the dawn of German capitalism; it ended at the high noon of German fascism. Spanning more than a half-century of momentous changes in German history, Sombart's work bears significantly upon the present crisis in the liberal-democratic world.

I. FROM INSTITUTIONALIST TO NATIONAL SOCIALIST

In 1917, Sombart succeeded his former teacher, Adolph Wagner, in a chair of economics at the University of Berlin. He had already distinguished himself as a scholar by his first volumes on the development of capitalism.[3] But university recognition had been withheld, it is thought, because of his pro-Marxian bias.[4] His investigations, brought to a close in 1927 with the appearance of *High Capitalism* ("Hochkapitalismus"),[5] combine economic interpretation, or what passed in his thinking for "economic theory," with a vast amount of historical research. And they serve as the basis for ranking Sombart as a leading exponent of what may be termed a "critical-genetic" type of institutional economics, largely shaped by peculiarly German philosophical or sociological tendencies.[6] Although it is not the purpose of this essay to attempt an evaluation of Sombart's contribution to our knowledge of the development of enterprise or capitalist economy, it

[3] *Der moderne Kapitalismus*, Vols. I and II (Leipzig, 1902); and *Der Bourgeois: zur Geistesgeschichte des modernen Wirtschaftsmenschen* (Munich and Leipzig, 1913) (English title: *The Quintessence of Capitalism*, trans. and ed. M. Epstein [London, 1915]).

[4] M. J. Plotnik, *Werner Sombart and His Type of Economics* (New York, 1937), p. 33.

[5] *Der moderne Kapitalismus*, Vol. III: *Das Wirtschaftsleben im Zeitalter des Hochkapitalismus* (Munich and Leipzig, 1928).

[6] See Talcott Parsons, *The Structure of Social Action* (New York, 1937), chaps. xiii and xvi.

should be noted that his "evolutionary approach" shares the confusion which seems characteristic of institutionalism generally. This confusion arises from the failure to appreciate the scope and function of theoretical economics in contrast with "economics" of the institutional sort.[7] Theoretical economics is, in the nature of the case, an abstract discipline whose method is mainly static and whose central problem is economy or economizing in the sense of maximizing utility under given resource-and-want conditions. Institutionalism is concerned with economic progress or development and claims to be "dynamic," not, however, in the mechanical but rather in the historical, biological, or organic sense.[8] In making the theory of economic progress the major theme of his brand of economics, Sombart denies, although not consistently, that *Wirtschaft*, or "economy," constitutes a valid basis for a scientific economics.[9] This denial stems from the general sociological framework of his inquiries, which prevents an appreciation of the significance of a theoretical economics and gives his theory of economic progress many of its characteristic, not to say aberrant, features. The feature of this theory of development, which constitutes the theme of this essay, is the relation that it bears (1) to the organic or totalistic conception of the individual and society as opposed to the libertarian or individualistic conception and (2) to National, or German, Socialism as the expression of this organic or totalistic view of society, more or less modified by the exigencies of practical politics.

Prior to the advent of National Socialism in Germany, Sombart was looked upon as an academic exponent of Marx. Indeed, his early interpretation of Marx's *Capital* earned him the blessing of the aging Engels. And Sombart once spoke of himself as a "convinced Marxist." Yet he spent the last years of his life ex-

[7] This confusion is to some extent present in the work of some of the leading theoretical economists, notably in that of Alfred Marshall (see George J. Stigler, *Production and Distribution Theories* [New York, 1941], chap. iv).

[8] See Frank H. Knight, "Statics and Dynamics" in his *The Ethics of Competition* (New York and London, 1936).

[9] Werner Sombart, *Die drei Nationalökonomien: Geschichte und System der Lehre von der Wirtschaft* (Munich and Leipzig, 1930), chaps. i and ii.

pounding the principles of naziism, or "German socialism," as he termed it. Was this a conversion and repudiation of his earlier ideas? The author does not think that it was. In the first place, the leitmotiv of institutionalism is the justification of social reform which proceeds from an open or implied critique of the liberal-capitalist order and involves the belief that a fundamental change in the ethical and legal position of the individual in relation to the state and society is desirable and/or inevitable.[10] If this view is well founded—and the author thinks it is—it is not surprising that Sombart's institutionalism should lead him in the end to support the establishment of a social and economic organization radically different from the kind which had formed the subject of his theory of progress or development. The question to be raised is why the espousal of National Socialism rather than of some other social order should be taken as the logical sequence in Sombart's theory of development. The answer is that this theory was influenced not alone by Marx and the German historical school of economics,[11] but by nineteenth-century German antilibertarianism. In this influence, variously expressed in German idealist philosophies and nationalistic movements, are also to be found the seeds of present-day German fascism. Before discussing the effect of this influence upon Sombart's work, his espousal of naziism should be considered.

In *Deutscher Sozialismus*, published in 1934, Sombart states that " 'a new spirit' is beginning to rule mankind."[12] This spirit

[10] In this connection note, e.g., J. R. Commons, *Institutional Economics* (New York, 1934), chaps. i, ii, viii, and xi; and Thorstein Veblen, *The Engineers and the Price System* (New York, 1921) and *Absentee Ownership* (New York, 1923).

[11] Cf. Wesley C. Mitchell, "Sombart's Hochkapitalismus," *Quarterly Journal of Economics*, February, 1929, pp. 303–23; reprinted in Mitchell, *The Backward Art of Spending Money and Other Essays* (New York, 1937).

[12] (Berlin and Charlottenburg, 1934) (English title: *A New Social Philosophy*, trans. and ed. Karl F. Geiser [Princeton, 1937]), p. 43. In many places the English translation is defective and for this reason was not used in the final draft of this paper. Only two examples of these defects can be cited here. In *Deutscher Sozialismus*, p. 212, Sombart speaks of "das Wohl des Ganzen." Geiser (*op. cit.*, p. 193) translates this as "the welfare of all" instead of "the welfare of the whole" or, perhaps, "the welfare of the community." Again, Sombart explains his conception of socialism as "einen Zustand des gesellschaftlichen Lebens, bei dem das Verhalten

marks the end of the "economic age"—the epoch of capitalism and proletarian socialism—materialistic, egoistic, and godless in its values. The order which embodies the "new spirit" is German socialism. This brand of socialism, he explains, differs from others, especially the proletarian or Marxian, which to him, as to the Nazi politicians, is essentially evil. Above all, German socialism is national in character. It is based upon the idea that "there can be no universally valid social order (*allgemeingültige Ordnung*) but only one that is suited to a particular nation (*Volk*)."[13] Sombart takes as past exponents of this type of socialism such figures as Plato, Goethe, Fichte, Adolph Wagner, Ferdinand Lassalle, Nietzsche, Lorenz von Stein, and Adolph Stoecker. The present-day exponents, Sombart informs us, are to be found among the Italian Fascists and German Nazis. Since German socialism is primarily national in character, it expresses those spiritual traits peculiar to Germans—their *Volksgeist*, or national spirit. Chief among these traits is the concern for community well-being or the public good. Accordingly, German socialism in contrast with liberalism places the "welfare of the whole above the welfare of the individual."[14] It conceives of society as an organic totality of which the individual is but a cell. Thus it seeks to create "a condition of social life in which the conduct of the individual is basically determined by obligatory norms which have their origin in a universal reason imbedded in the political community and which find their expression in custom (*nomos*)."[15] In conformity with the traits of the German people, German socialism demands a strong state *managed* by an élite[16] but *guided* by a leader (*Fuehrer*)

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des Einzelnen grundsätzlich durch verpflichtende Normen bestimmt wird, die einer allgemeinen im politischen Gemeinwesen verwurzelten Vernunft ihren Ursprung verdanken und im Nomos ihren Ausdruck finden" (*op. cit.*, p. 60). Geiser translates this passage as follows: "a condition of social life in which the conduct of the individual is determined by obligatory norms which have their origin in a universal political community based on reason . . . ." (*op. cit.*, p. 58). But as will be noted in the passage quoted above, Sombart does not speak of "a universal political community based on reason," as rendered by Geiser. He speaks of "a universal reason imbedded in the political community."

[13] *Deutscher Sozialismus*, p. 120.

[14] *Ibid.*, p. 212. [15] *Ibid.*, p. 60. [16] *Ibid.*, p. 214.

to whom alone God expresses the will of the people.[17] Sombart believed that his conception of the state (*Grossverband*) as the general all-embracing political association (*Verband*) was being realized in the present German Reich. "This German Reich," he states, "and this only is also the field of German Socialism."[18]

The aims of German socialism, Sombart explains, are not confined to the economic sphere[19] but embrace all phases of social life and thus involve a "total ordering of life" and an "articulation" or co-ordination of people according to estates.[20] In Sombart's conception, the estate (*Stand*) possesses a twofold meaning —the social and the political. In the social sense "the estate forms 'a part of the whole' (*'ein Teilganzes'*), which, together with the other parts make up the social organism (*gesellschaftlichen Organismus*)."[21] From this standpoint the estate may be a "purely statistical group with definite objective characteristics or an association which under the circumstances is animated by an estate-consciousness (*Standesbewusstsein*), estate-honor (*Standesehre*), and so forth."[22] According to Sombart, the estate in the social sense is divorced from its relation to the political state,[23] that is, from its function of co-operating in the formation of the state-will. Thus he thinks that the term should be applied only in the political sense.[24] Politically, the term designates "a group, recognized as such by the state, articulated in the state and entrusted by the state with definite tasks."[25]

One of the primary duties of the estate is "the cultivation of a definite sentiment (*Gesinnung*), of a definite spirit."[26] The peculiar spirit common to the members of an estate "should find expression in a larger number of persons in the same life situation."[27] And it should be "elevated to general significance so that it will thereby come to be recognized and accepted as a necessary ingredient of community life or, of the so-called whole."[28] Through the receipt of special privileges and the withdrawal of certain

[17] *Ibid.*, p. 213; also p. 242.
[18] *Ibid.*, p. 176.
[19] *Ibid.*, p. 244.
[20] *Ibid.*, p. 224.
[21] *Ibid.*, p. 220.
[22] *Ibid.*
[23] *Ibid.*
[24] *Ibid.*, p. 221.
[25] *Ibid.*
[26] *Ibid.*
[27] *Ibid.*
[28] *Ibid.*

rights by the state, the estate establishes the principle of inequality within the hierarchy of callings and ranks. In political and social life the functions of the estate are ethical-educational and economic. The ethical function involves "the cultivation of the honor and morals of the estate" and "the education of the youth to this end."[29] The economic function consists of effecting a "planned economy in accordance with state regulations."[30]

In developing the estate-structure and in "articulating" people accordingly, many institutions inherited from the past are temporarily to be retained, at least in outward form. Thus, in the immediate future or the transitional stage between "late capitalism" and "early socialism" the structure of capitalist enterprise will continue to exist, but it will be harnessed to the purposes of the state. Although some of the old institutional furniture is retained, the legal and moral setting is rapidly to be dismantled. While this dismantling of the old framework is going on, a new order of law and moral values will be under construction. This new order, Sombart insists, is the first condition of the estate-system and estate-articulation, that is, of German socialism itself.

In the new legal order which Sombart projects, "the individual, as a citizen, will have no rights but only duties."[31] The "ruling principle" in the new legal scheme will be "superindividual reason" rather than the "arbitrary will of the individual,"[32] which, according to Sombart, characterizes the liberal-democratic community. This principle of superindividual reason directs the common will, and the state is its incarnation. The new moral order is to be similarly nonindividualistic. According to its canons, "the state should never evaluate individual persons as such, but only the group which represents these persons."[33] The new moral values will thus supplement and reinforce the order of law. In this legal-moral order the group becomes a superpersonality endowed with a life of its own. A group ethic supplants one based upon "individualism"; and the groups that make up the social hierarchy come to be ranked according to their importance to the

[29] *Ibid.*

[30] *Ibid.*

[31] *Ibid.*, p. 229.

[32] *Ibid.*, p. 228.

[33] *Ibid.*, p. 229.

ends of life, as these are determined by the supreme authority, the state. Not only the groups in the different spheres or fields of activity but those in the same sphere as well are to be thus evaluated.

The purpose behind this transposition of values is the destruction of free economic institutions, as well as the free legal and political system. And of the free economic institutions it is not alone freedom of enterprise and private ownership of the means of production that are to be abolished but also the free market for labor, other services, and goods. That this is the chief end to be accomplished is evident in Sombart's grading of human life according to the value scale of the socialism he advocates. Of all groups or estates, the military, he contends, should hold first place, while the economic should hold last place. In the economic field, agriculture is ranked highest, since he holds it to be the most honorable of all economic pursuits. Among the agricultural groups those devoted to peasant farming mixed with handicraft production are given first place. But does not the establishment of a peasant economy on this basis require the breaking-up of the large holdings of the Junkers, Germany's great landowners? Sombart does not think so. All that is necessary, he believes, is to revive the feudal principle, whereby all land would henceforth be held as a fief or a privilege conditioned on rendering "noble" service to the state.[34] In the commercial and industrial sphere, small business groups are to be valued above large enterprises. Big business, especially in the modern industrial form, is "in every case to be regarded as an evil, even if, under certain conditions, a necessary evil."[35]

Now one would think that a purely German socialism, that is, one that expresses the German *Volksgeist*, would seek realization only within the language frontiers of pre-Nazi Germany. This, however, does not appear to be the case. As explained by Sombart, *Volksgeist* is not primarily a matter of race in the biological sense or of the nation as a political unit. It comprises *metaphysical* attributes. While these attributes predominate among people

[34] *Ibid.*, p. 316. [35] *Ibid.*, p. 230.

of the same biological heredity and political history, they may be found among people of a different racial origin and political experience. Accordingly, "the German spirit in a Negro," Sombart reasons, "is quite as much within the realm of possibility as the Negro spirit in a German. The only thing that can be shown is, that men with a German spirit are far more numerous among the German people than among the Negro people, and the reverse."[36] This *Volk* theory which Sombart thus embraces has had a long history in German thought, as we shall note, and has served as a basis for nationalism, pan-Germanism, and anti-Semitism. In Sombart's definition, as in that of Fichte, Chamberlain, Gobineau, and Adolph Wagner in the nineteenth century, *Volksgeist* comprises spiritual qualities, which can be recognized, it seems, only by the intuition of certain German philosophers. Thus, the German *Volksgeist* is the antithesis of the Jewish spirit. Possessing the Jewish spirit is not mainly a matter of being born of Jewish parents or of being reared in conformity with the Hebrew religion. The Jewish spirit is capitalistic.[37] The English are said to possess the capitalist and, accordingly, the Jewish spirit.[38] And Sombart thinks that the chief task of the German people and, above all, of National Socialism is the annihilation of the Jewish spirit,[39] for "what we have characterized as the spirit of this economic age .... is in many respects a manifestation of the Jewish spirit," which "to a great extent dominates our entire era."[40] Thus to rid mankind of this spirit "the institutional culture" must be so transformed that "it will no longer serve as a bulwark for the Jewish spirit."[41]

Since the *Volksgeist* has no definite relation to race or nation in the ordinary meaning of these terms, it should, because of its "superior" traits, permeate the life of other peoples and lands as the expression of a universal or world spirit. It thus leads to the idea of *Herrenvolk* and the justification of colonization and conquest or, in other words, to the notion of a world state. It is true

[36] *Ibid.*, p. 191.

[37] *Ibid.*, p. 195.

[38] See below, pp. 831–32.

[39] *Deutscher Sozialismus*, p. 195.

[40] *Ibid.*

[41] *Ibid.*

that Sombart does not explicitly give the term *Volksgeist* this meaning; but, when discussing the new German Reich and the imperialism of the democratic powers, the notion of world spirit and world state seems to lie in the shadows of his thinking. He states:

> The idea of the "Reich" does not properly belong within the orbit of a presentation of imperialism, as it is presented by so many, and . . . . at present by Wilhelm Stapel who anticipates the future in the return of the "Roman empire of the German nation" . . . . , and who frankly characterizes the establishment of this "Reich" as the most important problem of mankind. "Every people in the Reich forms a natural estate. Every estate has its morality. But the decision concerning the highest law, as well as the determination of the friend-enemy relation, will remain with the people of the Reich." The realization of this idea of the Reich would not signify a new imperialism, but as I have already said, an apparently new form of nation. It would put an end to the democratic idea—connected with the modern nation-idea by an historical accident—according to which all, even the most inconsequent nations, claim equal right to existence and action.[42]

It appears, then, that the old German dream of empire, expressed in such shibboleths as *Drang nach Osten*, *Deutschland über Alles*, *Mitteleuropa*, and *Lebensraum*, is an essential ingredient of Sombart's "purely-German socialism."

There appears to be a close affinity between the German socialism of Sombart and *der wahre Sozialismus* ("the true socialism") of Germany, which was advocated in the 1840's by such men as Moses Hess, Karl Grün, and George Kühlmann.[43] *Der wahre Sozialismus* was similar to Sombart's in that it was nationalistic and German. Although not wholly divorced from material or economic ends, it aimed at a "spiritual" revolution. It thus sharply contrasted with the proletarian socialism of Marx and Engels, who polemicized against it for the "narrow-minded nationalistic outlook" underlying its "sham universalism and cosmopolitanism." The following stanza was taken by Marx and Engels as a typical expression of the "spiritual," and therefore national, superiority claimed for Germany by these socialists:

[42] *Ibid.*, p. 203.

[43] For an account of the movement and its leaders see Karl Marx and Friedrich Engels, *Die deutsche Ideologie*, herausgegeben von V. Adoratsky (Moscow, 1932), pp. 435–527.

Franzosen and Russen gehört das Land
Das Meer gehört den Britten,
Wir aber besitzen in Luftreich des Traums
Die Herrschaft umbestritten.
Hier üben wir die Hegemonie,
Hier sind wir unzerstückelt;
Die andern Völker haben sich
Auf platter Erde entwickelt.[44]

Marx and Engels observed:

This Lofty Kingdom of Dreams (*Luftreich des Traums*), the kingdom of "real humanity," is held by these Germans [the true socialists] before the other nations with overwhelming self-satisfaction as the consummation and the purpose of world history; in each field they consider their day-dreams as the definitive and final judgment concerning the deeds of other nations. . . . . They think that they have been chosen to sit in judgment over the whole world and that the whole of history allows its final purpose to be realized in Germany.[45]

As to the relation between Sombart's socialistic views and the program of the Nazi political party, it is clear from his own words that he looked upon the party as the means of realizing the principles he espoused. This, of course, is not to say that he supported or even approved the violent and inhuman practices of the party leaders and their associates. Nor is it to say that Nazi politicians are overmuch concerned about the ideals or ethical canons of the new order of National Socialism, except in so far as they can be made to serve the end of maintaining personal power. But this political and moral nihilism of the present Nazi leaders, while an urgent consideration from some standpoints, is not directly germane to the question of the relation of Sombart's views to the Nazi party program considered as a social movement. Both the program[46] and Sombart's views have a common ground in (1) the

[44] *Ibid.*, pp. 453–54. Translation: "France and Russia possess the land,/The sea belongs to the Britain,/We, however, possess in the Lofty Kingdom of Dreams,/The uncontested Mastery./Here we exercise the Hegemony,/Here we are not broken into pieces;/The other nations have developed on the vulgar earth."

[45] *Ibid.*, p. 454.

[46] Among the works of the founding fathers or forerunners of National Socialism that might be consulted in this connection are: Gottfried Feder, *Das Program der N.S.D.A.P.* (Munich, 1932); Moeller van den Bruck, *Das Dritte Reich* (Hamburg,

repudiation of nineteenth-century liberalism and its "atomistic" or individualistic conception of society; (2) the idealization of the Middle Ages; (3) the proposal to reconstruct society on the model of estates; and (4) folk nationalism and its corollary, pan-Germanism. This basic agreement is by no means accidental. National Socialism as espoused by Sombart and as the program of a political party was evolved under the stress of the same pattern of thought.[47] Or, as stated above, this pattern of thought exerted a potent influence on Sombart's theory of economic development, and his National Socialism which coincides with the party program is a natural climax to that theory.

II. THE GERMAN OR ANTILIBERTARIAN PATTERN OF THOUGHT

The complex of influences which gives Sombart's theory its characteristic features and which determines its outcome has been termed the "specifically 'German' way of thought." According to the historian Troeltsch, the inventor of the term, this mode of thinking embodies a viewpoint concerning the nature of man and the social order which is essentially different from the "Western" or libertarian viewpoint.[48] This "German way of thought" is "organic," "universalistic," "nationalistic," or authoritarian, whereas the outlook characteristically denoted "Western" is "individualistic," "atomistic," or democratic.[49] To German nationalists like Troeltsch the German pattern denotes admirable qualities.

1931); Oswald Spengler, *Preussentum und Sozialismus* (Munich, 1920); Othmar Spann, *Der wahre Staat* (3d ed.; Jena, 1931); and Max Frauendorfer, *Der ständische Gedanke im Nationalsozialismus* (3d ed.; Munich, 1933).

[47] A discussion of the development of the Nazi party program from this pattern of ideas lies outside the scope of this essay. For such a discussion see William J. McGovern, *From Luther to Hitler* (Cambridge, Mass., 1941); and Rohan Butler, *The Roots of National Socialism* (New York, 1942). Highly suggestive is Professor John Dewey's much earlier *German Philosophy and Politics* (New York, 1915).

[48] See Ernst Troeltsch, "Lecture on the Ideas of Natural Law and Humanity," in Otto von Gierke, *Natural Law and the Theory of Society, 1500 to 1800*, trans. Ernest Barker (Cambridge, 1934), pp. 201–22.

[49] See Frank H. Knight, "Ethics and Economic Reform," Part II, *Economica*, August 1939, p. 297; and Barth Landheer, "Othmar Spann's Social Theories," *Journal of Political Economy*, XXXIX (1931), 239.

To others it may signify attributes of a very different character. But one can speak of a "specifically" German intellectual pattern only in the sense that in Germany, as in no other country, the characteristic traits of the pattern found a soil peculiarly adapted to its growth. And, while the traits never became firmly rooted in other countries, their influence even in these countries was significant. It was the manifestation of these traits in English literary and reform movements in the eighteenth and nineteenth centuries which led J. S. Mill to speak of the "Germano-Coleridgean doctrine" or the reaction in England against the Locke-Hartley-Bentham heritage and its French counterpart. The doctrine—or, rather, influence—was best expressed in the works of Wordsworth, Coleridge, Southey, Carlyle, and Ruskin. It appears also to have conditioned the "new liberalism" of the mid-nineteenth century, in which the elements of Tory "radicalism" and Christian socialism were frequently blended. One might say, then, that since the seventeenth century the history not alone of Germany but of the so-called "Western" powers has involved a conflict between these two opposing patterns of thought and conduct.[50] Relentlessly, though perhaps unobtrusively, the conflict still goes on inside the democratic powers. Herein lies the present liberal-democratic crisis, which, of course, is not to discount the importance of external military threat. The difference between Germany and the Western powers, however, is that in Germany the conflict between the patterns has been rather one-sided, the scales being weighted in favor of the "universalist," "authoritarian," or "antilibertarian" outlook.

We have taken Western thought to mean the liberal-democratic scheme of ideals and values. In much of the current popu-

[50] In viewing the past in the perspective of the problems of today, one is inclined to say that history, instead of being a succession of class conflicts, as Marx thought, is a succession of conflicts in various forms between groupism and authoritarianism, on the one hand, and individual and political freedom, on the other. An interesting autobiographical account of the conflict between the two types of thought in recent German history is found in Heinrich Hauser, *Time Was: Death of a Junker* (New York, 1942). Von Gierke's *Genossenschaftstheorie* strikes the author of this essay as an attempt to effect a synthesis between the conflicting patterns (see John D. Lewis, *The Genossenschaftstheorie of Otto von Gierke* [Madison, 1935]).

lar discourse such a scheme seems simply to mean representative or free government and freedom of speech, religion, and assembly. While the "Four Freedoms" are highly important in the practical realization of the liberal-democratic way of life, they are in fact secondary to or derived from abstract principles of an ethical nature. These principles declare (1) that the human personality is a supreme value and (2) that the individual has therefore an imprescriptible or "natural" right to freedom. Because of the significance it imputes to individual as over against social or group life, Western or liberal thought looks upon society as an *association of individuals* and makes a clear distinction between society and its organized expression, the state. Favoring voluntary action, that is, action by "mutual consent" among individuals rather than that compelled by force and authority, it has sought to fix within narrow limits the powers and rights of the organs of group authority vis-à-vis the individual. It makes the individual rather than the group "the real repository or locus of value, and the real choosing or moral agent."[51] This view of the individual and the social order found its classical expression in the laissez faire policies of economics and government of eighteenth- and nineteenth-century liberalism. Under pressure of interventionist tendencies of social reformers representing a new liberalism this viewpoint has lost much of its influence in the making of social policies. In the present state of public opinion its future appears to be dubious, to say the least.

In contrast with the libertarian outlook, the "German" outlook places the group rather than the individual in the center of the value scale. The exponents of the German viewpoint have found unhistorical and irrational the liberal conceptions of individual life as something distinct from social or group life and of society as a mere association of individuals. They have tended to think of society as a *Gemeinschaft* rather than as a *Gesellschaft*. As a *Gemeinschaft*, society is considered an organism and the individual somewhat akin to a cell. Accordingly, individual life becomes inseparable from that of the group and has no meaning apart from the group. Furthermore, in this approach the distinction that

[51] Knight, "Ethics and Economic Reform," *op. cit.*

liberalism makes between society and the state tends to be reasoned away. The state is regarded as the all-embracing organ of group life endowed with superpersonal existence. Such a conception of the individual and society must destroy freedom and individual rights in the libertarian meaning. It might be more accurate to say that it gives rise to a wholly different idea of freedom and individual right—that is, an idea compatible with the supremacy of group life and thus with an authoritarian, a nationalistic, or a collectivist organization of society.

In Germany the antilibertarian mode of thought was crystallized by the Romantic movement which swept the country in the first decades of the nineteenth century. The roots of the movement were in the German Middle Ages and probably more remotely in the Teutonic tribal past. Although stimulated by the nationalistic feeling following the Napoleonic defeat of Prussia, romanticism first came to life as a literary movement shortly before the French Revolution. And, while directed against the currents of thought set in motion by the Age of Reason and the Enlightenment, romanticism under Herder's influence appropriated Rousseau's idea of a state of nature and used it as the basis of its *Volk*-philosophy of nationality.[52] The kernel of this philosophy was the half-mystical idea of *Volk*, a being that originated in common traditions and experiences. Language was the peculiar creation of the *Volk* and served to unite people of the same *Volk* background and experience into a race and nation. Rousseau's man of nature was thus transformed into an *Urvolk* or "original folk." Following the defeat of Prussia by Napoleon at Jena in 1806, the movement assumed a political significance. The *Volk*-idea was still the kernel of the movement whose guiding geniuses used it as a counterrevolution to English and French liberalism (materialism). In its broad significance, romanticism was a reaction against the influences which had shaped the Western world since the fifteenth century.

The first of these influences was a reorganization of economic

[52] See Robert Reinhold Ergang, *Herder and the Foundation of German Nationalism* (New York, 1931), p. 60; and also Irving Babbit, *Rousseau and Romanticism* (Boston, 1919).

life on the basis of markets, individual enterprise, and competition, which resulted from the industrial and commercial transformation of the sixteenth to the nineteenth centuries. The second was the politico-ethical ideals of individual freedom and political equality which, espoused in the doctrine of natural rights, found expression in the American Declaration of Independence and the French Declaration of the Rights of Man. The third influence was the rise of natural science on the basis of the work of Galileo, Kepler, and Newton. The second and third influences are usually pictured by historical materialism as the outcome of the first—that is, of capitalism. What is more likely is that the influences were mutually determining. Thus seventeenth- and eighteenth-century natural science laid the technological basis for the economy of enterprise and markets. Furthermore, the natural-science view of the relation of mind and spirit to the physical universe tended to color the principles of the liberal politico-moral order. The idea of a social order governed by natural law reflected the scientific conception of an external physical universe moving according to mechanical laws. The principles of individual freedom and natural rights were thought to be corollaries of the natural-science tenet—that man is a free or autonomous agent who knows the external physical world through his sense organs governed by reason. Thus, when German romanticism sought to invalidate the world of reality depicted by eighteenth-century natural science,[53] it likewise sought to invalidate the doctrine and

[53] To German romanticism, reality is ideal in the metaphysical sense and not the hard, external world of matter described by eighteenth-century natural science. It thus opposed the eighteenth-century principle of "mechanical causality" and sought to supplant this "logocentric" approach with a "genetic" or "biocentrically oriented" interpretation of events. No statement, even if this author were competent to give one, need be made here of the defects of the eighteenth-century conception of causality. But today it is generally recognized among social scientists who take a "Western view of things" that it is not a question of the exclusive use of either the biological or the causal method as modified in scientific thought since the nineties. Each method has its appropriate use. If, however, it is contended that an exclusively "mechanical-causal" approach leads to a *static* and therefore a "conservative" view of social problems, it should also be noted that an exclusively biocentric one tends toward a "totalitarian" outlook because it subordinates individual being to that of the organism and group. It eliminates freedom of the individual as a thinking and, likewise, as a political agent. Long ago Rade-

ideal of individualism as taught by ethical liberalism. And, when it combated individualism as a politico-ethical theory and policy, it perforce attacked competition and private enterprise, the economic phases of individualism. Thus under the stress of a nationalism quickened by Napoleon's defeat of Prussia and the urge for German unification, German romanticism became a counterrevolution to liberal modes of thought and democratic institutions. Inside Germany the setting for this counterrevolution was furnished by the clash between the new and old institutions—business enterprise and scientific technology, on the one hand, and the Prussian-imperial (military) order, on the other.[54] The dominant tendencies of the counterrevolution were expressed in (1) the Fichtean-Hegelian schools of philosophy, (2) the school of historical jurisprudence or law, and (3) the Romantic school of economics.

III. THE ROMANTIC INFLUENCE

Abandoning his early admiration for the ideas of the French Revolution, Fichte became the ardent champion of a "new" freedom. Individual freedom in the libertarian sense was simply the desire to do as one pleases. True freedom, he argued, is not the so-called freedom of the individual will. It is freedom to do the right thing, and this arises from the mores and habits of the *Volk*. The plan of history is revealed through the nation or the state, the supreme organ of the *Volk*. True freedom, therefore, consists in the identification of the individual's will with the purposes of the state, by means of force, if need be. The doctrine of the rights of man, the theory of competition, and governmental laissez faire are cold rationalizations of sordid selfishness. And the application of

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macher, a physician of the Romantic era, noted that "a certain totalitarianism is a basic characteristic of all romanticism" (Alexander Gode-von Aesch, *Natural Science in German Romanticism* [New York, 1941], p. 11).

[54] Compare Thorstein Veblen, *Imperial Germany and the Industrial Revolution* (New York, 1915). Also note Gode-von Aesch's quotation of Nadler that "German romanticism" is the "culmination of East Elbian colonization. Germanization of the soil and its people preceded, and romanticism appears then as the final Germanization of soul and thought." Thus, "romanticism might be defined as the classicism of the German East, i.e., a final maturity of the western spirit in East Elbian blood" (Gode-von Aesch, *op. cit.*, p. 61).

these individualistic principles causes society to disintegrate into mutually destructive atoms.[55] To avoid these disintegrating results of the Industrial Revolution and the French Revolution, Fichte thus proposes a "rational" or planned economy. This proposal is set forth in his *Closed Commercial State*.[56] This state is essentially autarchical. In the interest of the social whole, the "rational" state must determine the use of property, regulate the supply of different types of labor, and fix economic rewards. As Butler notes, the *Closed Commercial State* contains an early expression of the "geo-political imperative,"[57] for it gradually develops into a supernational empire. This was in keeping with Fichte's pan-Germanism, the two main ingredients of which are (1) Herder's idea that "the members of a nationality and state are joined together by inner spiritual bonds"[58] and (2) the conception of the German nation as an original folk (*Urvolk*) whose "natural" qualities are to be found in its language. Thus Fichte argues that the destiny of the German race is "to be united into one body completely in accord with itself and uniformly developed." All persons speaking the same language, whatever their present political allegiance, belong to one race or nation. Constituting a single people or *Volk*, they should be united in one state. Accordingly, all people who speak the German language should be united in a German state—that is, all but Jews. The Jews he considers unassimilable by nature. Even though they may have lived in Germany for centuries and have spoken only the German tongue, Fichte thinks they should be exiled to a state of their own.[59]

Fichte's metaphysical theory of freedom supposes an identity between the ego and nonego—between subject and object. It thus leads to an organic or totalistic conception of society in which the

[55] Fichte's general philosophy and his political ideas are set forth, respectively, in his *Wissenschaftslehre* ("The Science of Knowledge"), trans. A. C. Kroeger (London, 1889) and *Grundlage des Naturrechtes* ("Science of Rights"), trans. A. C. Kroeger (London, 1889). The above summary is based on McGovern, *op. cit.*

[56] J. G. Fichte, "Der geschlossene Handelstaat," *Sämmtliche Werke* (Berlin, 1845–46).

[57] *Op. cit.*, pp. 42 ff.

[58] Ergang, *op. cit.*, p. 102.

[59] English title: *Addresses to the German Nation*, trans. R. F. Jones and G. H. Turnbull (Chicago, 1922). For summary in text see McGovern, *op. cit.*, pp. 238–39.

reality of the individual as such is assumed to be nonexistent. His theory of the *Volk* supports authoritarianism and state socialism. These ideas were refined by Hegel and made their appearance in economics and law.

Hegel, it has been observed, was a "harvester of the romantic crop."[60] His theory of the state contains a mystical formulation of the *Volk*-idea. He converted *Volk* into Spirit (*Geist*), which in time and space is but a manifestation of an Eternal Spirit or God. Thus the state, the highest expression of *Volksgeist*, is divine. "The State is the Divine Idea as it exists on Earth."[61] It is therefore final and right. Freedom in its noblest and highest sense consists in the subservience of the individual to the supreme will of the state. Free action, according to Hegel, is action according to reason. As the state is the embodiment of universal reason, rational action on the part of individuals demands that they unquestioningly obey the laws of the state. Hegel's views, like those of Fichte, were essentially antilibertarian and supported authoritarianism. Furthermore, like Fichte, Hegel was no admirer of a system of competitive enterprise. Wallace, in his lectures on Hegel, stated that Hegel thought that "when society is left to its own unregulated activity, the growing interdependence of men upon each other leads to the generation . . . . of a small class of immensely rich, and a numerous class, depressed in its resources below the normal level of subsistence, lost consequently to all sense of law and honesty and honor—a rabble, or . . . . Proletariat."[62] To prevent the development of a proletariat means preventing the accumulation of excessive wealth. This accords with the highest good of society. To check the race for riches, on the one hand, and to prevent the degeneration of the worker, on the other, Hegel proposes that the medieval guilds and corporations be revived in modern form. Above these revived organs of the

[60] Gode-von Aesch, *op. cit.*, p. 208 n.

[61] Hegel, *The Philosophy of History*, trans. J. Sibree (New York, 1900), p. 39.

[62] William Wallace, *Lectures and Essays on Natural Theology and Ethics* (Oxford, 1898), pp. 413–14. According to McGovern, "when we read the writings of Alfreda Rocco, perhaps the most important of the 'official' Fascist philosophers, we almost feel that we are reading Hegel's *Philosophy of Right* denuded of its metaphysical background" (*op. cit.*, p. 268).

Middle Ages would be the all-powerful state which would co-ordinate their purposes and regulate their activities. Hegel's theory of the state forms a connecting link in his philosophy of history, which, in turn, is a product of monistic idealism. In its historical application, monistic idealism required "a unified conception of human life and history as a whole."[63] This conception of human life was symbolized in the *Volk*. History, then, is but the progressive unfolding of the *Geist* of the *Volk* in a continuous process of self-realization. In the process, free will and necessity are harmonized. Hegel's philosophy of history was thus the ultimate source of "historical relativism," which was later to exercise a profound influence upon social thought inside and outside Germany.

Hegel, it is said, lifted the *Volk*-idea into the heaven of metaphysics, where it found abode in transcendental authoritarianism. But the school of historical jurisprudence rescued it from the skies and invested it with earthly robes. According to this school, as led by Savigny in the Romantic period, law, like language, originated in the *Volk* and is therefore an expression of its spirit (*Geist*). A German law conveying the authority of the German state must then be an expression of the spirit peculiar to the German people. This philosophy of law was carried over into the domain of abstract rights. Here it served as a counterweight to liberalism. The members of the school contended that, historically, the group precedes the individual and that the rights and powers of the individual stem from group authority and sanctions rooted in customs and traditions. In consequence, no historical justification can be found for the abstract right of the individual based upon natural law. And to derive the origin of the state from a contract among free rational individuals, as did the eighteenth-century liberals, is absurd. Historical proof exists only for a doctrine of group-right or law (*Volksrecht*).[64] None can be found for individualistic natural rights.

It was, of course, a rather simple task to disprove the historical authenticity of natural rights whether as an explanation of the

[63] Parsons, *op. cit.*, p. 479.

[64] Gierke, *op. cit.*, pp. l–lxxxvii.

origin of society and the authority of the state or as the basis of individual freedom. The plain fact is that as *history* the doctrine is sheer romance. But it was more difficult to reject the ethical implications of the doctrine without at the same time casting overboard the idea of individual autonomy and freedom, of which it was the basis. Although nineteenth-century liberalism under Bentham's influence abandoned the doctrine of natural rights, it necessarily retained its allegiance to the idea of individual autonomy.

It is unnecessary to point out the limitations of the ideal of individual freedom in the eighteenth and nineteenth centuries. The existence of Negro slavery, the conditions of the poor, and the exclusion of women in the application of the doctrine have no doubt already occurred to the reader as being in violent conflict with the libertarian principles of freedom. But it is important to note that these limitations in no way lessened the value of the ethical doctrine and ideal of freedom. They simply showed the necessity of applying the doctrine more realistically and more widely. In its ethical meaning the natural-rights doctrine simply held that all individuals possessed an equal right to freedom. To nullify this right is to destroy the essential nature of man as a human being. In this sense the doctrine is a matter of belief and, indeed, of hope. It is therefore not subject to historical verification. But the purpose of the school of historical law was not merely to expose the unhistorical foundation of natural rights. It was also to annihilate the doctrine that men ought to be free whether they were free in fact or, indeed, wanted to be free in the libertarian meaning of the term.

The Romantic influence took effect in economics as well as in jurisprudence. Typical representatives of the influence in economics were Adam Müller, Ludwig von Haller, and Friederich Gentz.[65] All three writers combated the doctrines of natural rights and social contract. Of the three, Müller is of most consequence. In his views organicism and the *Volk*-theory were attired in eco-

[65] Wilhelm Roscher, "Die romantische Schule der Nationalökonomie in Deutschland," *Zeitschrift für die gesamte Staatswissenschaft*, Vol. XXVI (1870); also see Othmar Spann, *History of Economics* (New York, 1930), pp. 158–70.

nomic garb. His chief contribution, according to Roscher, was that of championing "the doctrine of the organic whole of the state, in general, and of the national economy, in particular. Müller thought that man is unthinkable except as a totality of human affairs, as a relation to a living whole."[66] The living whole is the nation (*Volk*), in which is embodied the spiritual solidarity of mankind.

The state, which effects this spiritual bond between man and man, between the past and the present, is no mere human tool. It is itself a person, a unique free whole in which private and public life are all but indistinguishable. Müller's economic views corresponded with his authoritarian and nationalist political sympathies. Not only the state but the national economy is assured by the spiritual continuity of national (*Volk*) existence. Real economic value and wealth are thus immaterial, since they can be guaranteed only by national (*Volk*) continuity and oneness. "Just as physical capital is expressed primarily through money, spiritual capital is expressed primarily through speech."[67] The most significant spiritual capital is commercial experience. In Müller's estimation the ideal money is paper because it binds one to his country. He attributes to paper money the power of restoring the natural-service economy of the Middle Ages with its moral well-being and its "blending of person and things."[68] In extolling the virtues of the corporate organization of the Middle Ages, Müller exhibits the characteristic longing of romanticism for a revival of feudal principles. Thus true to the Romantic tradition, he was no admirer of the economic system of private property and competitive enterprise. He regarded property as the right of usufruct and thought it should ultimately be held in common.

The Romantic influence as expressed in economics, philosophy, and law nourished early nineteenth-century German nationalism and was, in turn, nourished by it. It was the means of combating the ideals of popular sovereignty and democracy. It furnished the intellectual props of absolutism and caused Prussian paternalism to be sublimated into embryonic "National Socialism." It was

[66] Roscher, *op. cit.*, pp. 78–79. [67] *Ibid.*, pp. 81–87. [68] *Ibid.*

the inspirational source for later rationalizations of state socialism in the Bismarckian era of industrialism, German unification, and emergent "proletarian" socialism. And, finally, it served as the background for the development in late nineteenth-century Germany of "historical relativism" and the theory of group-mind and group personality. Historical relativism found application in Schmoller's economics. The theory of group-mind and group personality made its appearance in Dilthey's *verstehende* psychology.

IV. STATE SOCIALISM, HISTORICAL ECONOMICS, AND THE "*Verstehen*" APPROACH

The state socialism of Bismarck was undoubtedly influenced by the Romantic stream of thought. Bismarck's conception of the state as the supreme organ of group life rested on Hegel and Fichte. His policy of state intervention not only was in keeping with the Romantic heritage but showed the effects of it upon his thinking. This policy was "the protest of collectivism against individualism" and "of nationality against cosmopolitanism."[69] It proceeded "from the axiom that the duty of the State is to maintain and promote the interests, the well-being of the nation as such."[70] When Bismarck was attacked for his "socialistic" reforms in the German Reichstag in the eighties, he explained that his socialism was nothing more than the extension to modern industrial conditions of the "common law" policies of the Great Elector, Frederick William I, and Frederick the Great of Prussia.[71] Indeed, "proletarian" socialism itself was affected by German nationalism and state socialism. No less a figure than Lassalle, a leader of working-class socialism, spoke glowingly of Fichte's Germanism and looked upon Fichte as the source of his conceptions of the state and socialism.[72] He and other Social Democrats of the time, especially Bebel, approved Bismarck's re-

[69] William H. Dawson, *Bismarck and State Socialism* (London, 1891), p. 14.

[70] *Ibid.*

[71] *Ibid.*, pp. 15–16 and 28–35.

[72] See Ferdinand Lassalle, "Die Philosophie Fichtes und die Bedeutung des deutschen Volkgeistes," *Gesamtwerke* (1862), Vol. X; and also Jürgen Bona Meyer *Fichte, Lassalle und der Sozialismus* (Berlin, 1878).

forms on the ground that working-class socialism was supported by them.[73] Bismarck, Bebel remarked, was the student, while they, the Social Democrats, were the teachers of socialism.

In the *Kathedersozialismus* of Schmoller and Wagner, Bismarck's state socialism found its academic equivalent. Although never an advocate of pan-Germanism as Wagner was,[74] Schmoller was an exponent of nationalism, and his theory of social reform was grounded upon nationalistic considerations. Theoretical justification for the doctrine was furnished by historical economics.

As a leader of the younger historical school, Schmoller rejected the abstract-deductive method of Smith, Ricardo, Mill, and their followers. He contended that only a few of the principles derived by this method had been scientifically established. Most of the principles, he thought, were mainly the "party-doctrines of individualism and liberalism."[75] They were, therefore, without universal validity. To meet the needs of a particular people, economic laws had to be derived from that people's experience and history. But Schmoller's "historical relativism" was not purely scientific in its motivation. In this respect it was like that of the school of historical jurisprudence. It was not simply a scientific method that Schmoller opposed but a view of the social order and man's function in it. In a speech before the Verein für Sozialpolitik, which he helped to found, he stated that the task of German political economy was to rid the science of English and French liberal-utilitarianism. Denying that free trade and laissez faire were suitable policies for Germany, he advocated state intervention as a means of promoting industrialism and likewise of improving the condition of labor. His interventionism, like Bismarck's, was stamped in the Prussian die. "A firm monarchy," he said, "is a great blessing when it is bound up with traditions like

[73] William H. Dawson, *German Socialism and Ferdinand Lassalle* (New York, 1899), p. 267.

[74] For an account of Adolph Wagner as a founding father of naziism see Evalyn A. Clark, "Adolph Wagner: From National Economist to National Socialist," *Political Science Quarterly*, Vol. LV (1940).

[75] See Gustav Schmoller, *Ueber einige Grundfrage des Rechts und der Volkswirtschaft* (Jena, 1875).

those of the Prussian monarchy, which recognizes its duties."[76] Thus Schmoller's economic theories were no less opposed to liberalism than to Marx's proletarian socialism.

According to Spann, Schmoller's economics fell away toward positivism in spite of its emergence from romanticism and post-Kantian German idealism.[77] Such an indictment can hardly be brought against Wilhelm Dilthey's *verstehende* psychology. According to Dilthey, the associational psychology of Hume, Hartley, and Mill reasoned about human behavior in the mechanical analogy of Newtonian physics and thus isolated man from his social environment. Conceiving man as an abstract individual, it failed to study the higher plane of consciousness where the individual reflects the soul of the nation. In Dilthey's view man must be studied as the subject of the group's mores and traditions. This requires the *Verstehen* or the cultural as opposed to natural scientific method. Dilthey's was not simply what is termed "social psychology," although he undoubtedly contributed to its development. Under this difficult concept, *Verstehen*, he meant the "understanding" of a "cultural totality" or "whole" in terms of its "meaningful relationships." Such "relationships" are objectified in institutions and the concrete facts of life in which the determining element is the *Geist* or *Volksgeist*. "Meaningful relationships" are to be grasped, however, through intuition rather than by causal analysis or the intervention of formal concepts.[78] Dilthey's method of *Verstehen* and his idea of "culture-wholes" are but a different version of the "organic" social theory which, with its emphasis on group-mind, "ideal reality" and "historical relativeness," harks back to Hegel and nineteenth-century German romanticism. These theories lead inevitably to the sanctioning of a totalitarian social order. And it appears from a cursory examination that Spann's theory of totality,[79] which contributed to intellectual fascism before Hitler, is an offshoot of Dilthey's ideas.

[76] Dawson, *Bismarck and State Socialism*, pp. 1–3.

[77] Spann, *op. cit.*, p. 11.

[78] Parsons, *op. cit.*, pp. 481–87 and 586–91.

[79] See R. Stolzmann, "Die Ganzheitlehre Othmar Spanns," *Jahrbücher für Nationalökonomie und Statistik*, LXXII (3d ser., 1928), 881–918.

V. SOMBART: A RECAPITULATION AND SUMMARY

As a student at the University of Berlin, Sombart came under the influence of Schmoller, Wagner, and Dilthey. It is evident that the ideas of these men exerted a decided influence over him. The imprint of these ideas is to be found not alone in his espousal of National Socialism at the close of his life but also in his early "scientific" work.

At the beginning of this essay it was noted that Sombart saw Germany's National Socialism as the embodiment of a "new spirit" which is "social" and "national" in character. But the idea of a "new spirit" was no sudden discovery with him. It seems to have animated his thinking as far back as the nineties. In the first edition of *Socialism and the Social Movement* he stated that a "new spirit had come into man."[80] Promoted by the teachings of Carlyle and such Christian socialists as Maurice and Kingsley, this spirit was repairing the evils of the "French Revolution and Chartism"—"mammonism, selfishness, forgetfulness of obligations."[81] These evils of "eudemonistic utilitarian philosophy" were being supplanted by "idealism," "faith," and a "social" interest. Even at this early time Sombart's concern for a social, instead of an individualist, view of things was colored by a nationalist outlook. "There is," he noted, "an antithesis around which the whole history of society turns, as around two poles: social and national."[82] Thus he admonished the proletariat of Western Europe that, in the face of Russian and Japanese economic progress, "there can be no talk of an essential repudiation of nationalism"[83] on its part. "An artificial sympathy with the most downtrodden people (coolies) would prove too weak to restrain a sound national self-interest."[84]

With Sombart, as with Fichte and Hegel, nationality was an ever present consideration. And, like Fichte, Sombart was inclined to regard nation (*Volk*) and race more or less synonymous-

[80] Sombart, *Socialism and the Social Movement in the 19th Century*, trans. Anson P. Atterbury (New York and London, 1898), pp. 57–58.

[81] *Ibid.*

[82] *Ibid.*, pp. 1–2.

[83] *Ibid.*, pp. 59–60.

[84] *Ibid.*, pp. 165–68.

ly and to evaluate different nationalities on a rather arbitrary scale of sociopsychological attributes. Thus, during the first World War he described the English and Germans as respectively a nation of merchants and a nation of heroes.[85] It is perhaps true that he made this distinction between the two nations under the spell of wartime patriotism. But the conceptual basis of the distinction had been laid earlier in his analysis of the development of capitalism. In this analysis he thought that the "capitalist spirit" was *inherent* in "Trading Peoples" but absent in "Heroic Peoples."[86] The Scotch, the Jews, the Frisians, and Etruscans are trading peoples; but the "Celts, a few of the German tribes, the Goths in particular," are heroic.[87] Now the qualities that compose the "capitalist spirit" and which thus distinguish "traders" and "heroes" "all spring from certain qualities in the soul."[88] Since the Scotch and the Jews are traders, they have the same kind of "soul." Therefore, "Scotchman and Jew are interchangeable terms."[89] By a similar process of reasoning Sombart concludes that capitalism had a common moral basis for its development in the scholastic, Judaic, and Puritan-Christian attitude to the acquisition of wealth.[90] But, having discovered the "soul" of all trading peoples to be the same, Sombart proceeds to show how essentially different Jews are from other traders. He states: "They [the Jews] derive their profits *from* war, murder, or assassination, while other peoples seek to derive it *by means* of war, etc."[91] What Sombart intended to convey by this contrast between the phrases, "*from* war" and "*by means* of war," is not clear to the writer. However, the statement and, more especially, the metaphysical theory of race and nationality from which it stems lead one to doubt that Sombart's *Jews and Modern Capitalism*[92]

[85] Sombart, *Händler und Helden: patriotische besinnungen* (Munich and Leipzig, 1915).

[86] *The Quintessence of Capitalism*, pp. 213–17.

[87] *Ibid.*

[88] *Ibid.*, pp. 200–201.

[89] *Ibid.*, pp. 100–101.

[90] *Ibid.*, pp. 263–64.

[91] *Ibid.*, pp. 100–101.

[92] *Die Juden und das Wirtschaftsleben* (Leipzig, 1911) (English title: *The Jews and Modern Capitalism*, trans. M. Epstein [London, 1913]).

was simply an objective presentation of the *contribution* of this people to modern economic life. In identifying Judaism as a moral basis of capitalism Sombart closely follows the pattern set by such early pan-Germanists as his teacher, Adolph Wagner, who looked upon English free trade and laissez faire or "Manchesterism" as Jewish. And he considered this Jewish spirit inimical to the German Fatherland of loyal peasants and Junkers.[93]

In his analysis of the development of capitalism, Sombart's main idea is that of *Geist*, or spirit—a term which Hegel and the romantics had long before employed. To Sombart capitalism is a unique arrangement of institutions, an economic system which objectifies an inner spirit—the "capitalist spirit." The bearer of the "capitalist spirit" is the entrepreneur. The elements that make up the "capitalist spirit" are (1) "the spirit of enterprise," which is "a synthesis of the greed of gold, the desire for adventure," and "the love of exploration" and (2) "the bourgeois spirit," which is "composed of calculation, careful policy, reasonableness and economy."[94] Sombart thought that while the "capitalist spirit" may be discovered in other periods of history it is only in the "economic age" that the conditions appropriate for its complete unfolding appear.[95] Thus the "capitalist spirit" and the institutions embodying it are purely transitory episodes in the evolution of society. In consequence, the laws of capitalism, like all economic laws, are neither final nor universal. They are only valid for capitalism. There is, then, no science of "economy," or *Wirtschaft*, in the general or universal meaning of theoretical economics.[96] Here is to be seen the influence of Schmoller's historical economics and, likewise, of Dilthey's *Verstehen* or cultural-scientific method. Capitalism in Sombart's view is not only historical and relative. It is a "cultural-whole," in which a "social mind" (*Geist*) is objectified. As a cultural phenomenon—that is, as man's creation—capitalism should be studied by the method of *Ver-*

[93] See Clark, *op. cit.*

[94] *The Quintessence of Capitalism*, p. 22.

[95] *Der moderne Kapitalismus*, I, 25.

[96] *Die drei Nationalökonomien*, chaps. i, ii, and iii.

stehen rather than by that of natural science as adopted by the various schools of theoretical economics.[97]

By *Verstehen*, Sombart means understanding the sense-context (*Sinnerfassen*). "We make a phenomenon understandable to ourselves by discovering its meaning or sense (*Sinn*). This, again, signifies that we draw the phenomena into a relation known to ourselves."[98] The theory of knowledge which underlies this approach rests upon the old Romantic assumption of identity between the knowing subject and the object of knowing. Like Dilthey, Sombart accepted this assumption. He states:

> . . . . all "verstehende" knowledge is on this account immanent, because the knower and his object belong to the same sphere and that is indeed the sphere of spirit. Culture is objectified *Geist* [Mind], the knowing human being is subjective *Geist*, because in his soul (*psyche*) flows the capacity to think ideas, to fix goals, to set norms which distinguishes him from all living things and enables him alone to create culture, that is to say, to objectify his nature in external institutions and symbols.[99]

While it was only later in life[100] that Sombart attempted definitely to develop an economic system with the *Verstehen* approach, his use of this approach is evident somewhat earlier. In his treatise, *Marxism* (1924), Sombart contends that socialism loses its real meaning when collectivization of property is made its primary test. He thought that socialism should be conceived as a "definite spirit"[101] which manifests itself objectively and subjectively. As an objective condition, socialism signifies "a definite manner of forming a socially unified life which deeply imbeds itself in social institutions."[102] Psychologically, it is the manifestation of the spirit (*Geist*) of socialism in the individual—that is to say, a mental state in which the individual (the socialist) shows a consciousness of the internal unity and goal of socialism.[103] How is the phenomenon of socialism to be studied? In the same manner as that of capitalism or any other such social phenomenon:

[97] *Ibid.*, chap. x.

[98] *Ibid.*, p. 196.

[99] *Ibid.*, p. 198.

[100] *Ibid.*, chap. x.

[101] *Der proletarische Sozialismus* ("Marxismus"), zehnte vergearbeitete Auflage der Schrift "*Sozialismus und soziale Bewegung*" (Jena, 1924), p. 6.

[102] *Ibid.*

[103] *Ibid.*

We must direct our attention away from the external aspects of the phenomenon to the inner organizing principles (*Gestaltungsprinzipien*) of social life.[104] "We must endeavor to comprehend the general organizing wills (*Gestaltungswillen*) of society in its external [objective] expressions and to discover in them the unique organizing-will which we call socialism."[105] Thus socialism must be comprehended in terms of its internal unity (*Einheit*), from which its unique organizing principle is derived. Such comprehension is possible only by means of the *Verstehen* approach. This enables us to *understand* (*verstehen*) socialism in its *meaningfulness* (*noetisches Verstehen*), as well as causally (*genetisches Verstehen*) and historically (*kritisches Verstehen*).[106]

On the basis of the *Verstehen* method Sombart distinguishes two main types of socialism, each embodying a distinct organizing principle. One type is equalitarian; the other is nonequalitarian. The former proceeds from the supreme idea (principle?) "that all should be partners."[107] Proletarian or Marxian socialism comes under this type. The other type "proceeds from the view of the human community as a *whole*, from a concrete organizing idea (*Gestaltungsidee*), whose realization consists in assigning a definite place to the individual in the strata of the whole. It thus leads to an organized association of individuals and, accordingly, to inequality."[108] It is not clear whether Sombart's sympathies were at this time inclined toward this second type of socialism. But the essential harmony between this type and German socialism as espoused by him later is beyond question.

The influence of Marx on Sombart has often been noted. But the manner in which the influence took effect has seldom been made clear. What Sombart took from Marx was the conception of capitalism as a unique "system" of production. He also accepted Marx's thesis of the inevitability of social change, which blended in some respects with Schmoller's "historical relativism." "The theory of Marx," Sombart explains, "affirms the identification of that which is actually observable as the result of economic de-

[104] *Ibid.*

[105] *Ibid.*

[106] *Ibid.*, p. 23.

[107] *Ibid.*, p. 25.

[108] *Ibid.*

velopment."[109] However, to Marx not only change but *progress* was inevitable. Marx therefore *approved* of capitalism as superior to previous economic systems and as a necessary stage in man's upward march to socialism under the banner of the proletariat. Though a child of German romanticism, Marx was an errant one who considered collectivism as the only means for realizing natural rights and individual freedom. Sombart never shared Marx's "cultural optimism"[110] or his political ethics and faith. His reference to the evils of the "French Revolution" and "Chartism" has been noted. It was but a few steps from this position to an open confession of belief in Fichte's and Hegel's ideas of liberty and the authoritarian state. Behind Sombart's "objectivity" there always seems to have lurked a skepticism of the "good" in capitalism. He was similarly skeptical of the proletariat whose socialism he ultimately denounced as destructive of all spiritual values. His doubt as to the moral value of capitalism was paralleled by an admiration of the feudal order. Though not openly stated until late in life, this admiration subtly appears much earlier. For example, in describing the historical background of capitalism and Marxism, he speaks of "the tragic dissolution of the 'enchanted' oneness (*Ganzheit*) of feudalism which stemmed from a collective authority."[111]

If there was ever any confusion about Sombart's relation to Marx, Sombart removed it in 1927 when he published his last volume on capitalism. He stated: "When Marx conceived his ideas, capitalism was a new land. . . . . Then it was morning and the skylark sang. Today the evening draws nearer and the owl of Minerva has begun her flight. . . . ."[112] What Marx spoke was the first proud words on capitalism. In this work is said the modest last word."[113] Seven years later he published his book proclaiming National Socialism to be the next step in social organization.

[109] *Socialism and the Social Movement*, pp. 100–101.

[110] *Ibid.*, pp. 59–60; and also *Hochkapitalismus*, erster Halbband, p. xxi.

[111] *Der proletarische Sozialismus*, p. 31.

[112] *Hochkapitalismus*, erster Halbband, p. xix.

[113] *Ibid.*, p. xxi.

CAPITAL THEORY IN A SYSTEM WITH NO AGENTS FIXED IN QUANTITY

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I

IN AN economic system in which the original productive agents are fixed in quantity and all other agents are produced by these, analysis of the effect of capital accumulation upon the distribution of income is fairly simple. A model may be more useful, however, in which all agents are augmentable in varying degrees (save that nonaugmentable agents should be admitted as the limiting case). It is the purpose of this paper to state the conditions necessary for varying augmentability; to define a companion function which with the familiar elasticity of substitution will determine the position of equilibrium in such a model at any given level of income; and to formulate two additional functions which will measure the movement of equilibrium, hence of relative agent quantities and of values, as investment occurs and income increases. The analysis will be applied not merely to successive positions of static equilibrium but also to each moment during the process of investment. Throughout, the assumption of perfect competition will be adhered to in the sense of perfect foresight, infinite number of suppliers in each market, and horizontal demand curve for each supplier, but not in the sense of any Aladdin-like ability to transfer resources instantaneously from one field to another.

Professor Knight, in criticizing the Austrian concept of original productive agents fixed in quantity, has pointed out that analysis will be more relevant to the real world if it deals with a system in which "all the productive agencies use each other (or are used jointly by the enterprise) and all are jointly maintained and reproduced by all."[1] He thinks of any general class of capital instru-

[1] "The Ricardian Theory of Production and Distribution," *Canadian Journal of Economics and Political Science*, I (1935), 196, n. 41.

ments (including land) as presenting "an infinite variety of conditions as to . . . . possibilities of increase in supply."[2] Elsewhere he discusses the causes of diminishing returns from investment in such a system.[3]

However, if the phrase "jointly maintained and reproduced by all" is taken at face value, his model seems internally inconsistent. If all agents may be reproduced by the services of other agents, it follows that all may be jointly augmented by all.[4] Mr. Kaldor has pointed out[5] that, if all agents may be augmented merely by use of the services of other agents, two results follow: (1) any agent may be augmented at constant cost, in terms of the services of other agents and (2) hence the marginal rates of substitution between agents will be invariable. Shifts in demand will merely result in shifts in quantities of agents (including the creation of new agents). There will not be diminishing returns from investment, for investment will augment whatever agent is tending to increase in value.

Failure of Mr. Knight and Mr. Kaldor to understand each other's views is due, I believe, to the failure of both to visualize, or at least to state clearly, one further characteristic of the system Mr. Knight is describing. Let us assume that all agents (save in the limiting case) are augmentable by a process which involves use of the services of other agents but that augmentation of at least some agents *requires in addition the use of materials which, before the augmentation began, were extra-marginal.*[6] All agents are

[2] *Ibid.*, p. 19.

[3] "On the Theory of Capital: In Reply to Mr. Kaldor," *Econometrica*, VI (1938), 78–80.

[4] For it seems both possible and economic in such a system to produce an added quantity of an agent by the same method used to replace a worn-out quantity of that agent.

[5] Nicholas Kaldor, "Annual Survey of Economic Theory: The Recent Controversy on the Theory of Capital," *Econometrica*, V (1937), 201–33; and "On the Theory of Capital: A Rejoinder to Professor Knight," *ibid.*, VI (1938), 163–76; see esp. "Annual Survey," *ibid.*, V (1937), 228–30.

[6] I use the term "materials" for want of a better. An item can hardly be called an agent until it comes into use. I mean the term "materials" to include human beings and their capacities. The adjective "extra-marginal" must not be taken to indicate "lower grades of existing agents." This is a contradiction in terms (see

then augmentable, but in varying degree; hence investment will bring diminishing returns. The necessary condition for "an infinite variety of conditions as to . . . . possibilities of increase in supply" (cost curves of infinite diversity of slope) is an infinite variety of gradations in the usability of the extra-marginal materials required.

This is a realistic assumption. Our economic order is built upon a physical world consisting of materials of infinite variety—which means, from the economic point of view, in infinite gradations of usability or, if you please, of "quality."[7] Once economic agents existed, these agents have continuously constructed added productive facilities by operating not only upon one another but also, as changing values made it economic to do so, upon erstwhile economically extra-marginal physical materials.

It is a model recognizing the role which extra-marginal materials play in the process of capital accumulation which is discussed in this paper. Hence in our model, as the process of investment brings a rise in the value of an agent,[8] formerly extra-marginal materials become just worth using, and services of existing agents

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Part IV, below). Extra-marginal materials are any materials, whatever their degree of similarity or dissimilarity in function to existing agents, which are not worth using.

[7] Since materials which can be used most advantageously will, of course, be first used, production of each added increment of an agent from such materials requires the application of a larger quantity of the services of existing agents to the extra-marginal material than did the production of a previous increment of equal productivity. (Since comparison of productivity is meaningless if any finite change in conditions occurs, this comparison is valid only if we assume all other conditions in the system given and the increments compared infinitesimal in size.) Or if, because of the differing quality of successive increments of the extra-marginal material, most economical production of successive increments of an agent calls for the application of the services of existing agents in different proportions, thus making comparison of the quantities applied invalid, we may say that production of successive increments requires the sacrifice of increasing quantities of value or of near-future consumption income. This is what is meant by saying that the agent is augmentable only at increasing cost.

[8] In terms of current productive services. The agent need not rise in value relative to other agents. Increased propensity to invest will bring a rise in the capitalization ratio and may cause augmentation of all agents, including those whose value relative to other agents as a group has fallen.

are combined with them (in an infinite variety of proportions) in the construction of added productive items. If these items are identical in function with an existing agent, they may be considered simply as added quantities of that agent. Because of the difficulty of handling creation of new agents, it will be a convenient first approximation to assume that all investment simply adds to the quantity of existing agents in this way.[9] The case of creation of new agents is considered below, in Part IV.

The concept of investment period (or "period of production") is inapplicable to the model under discussion for several reasons. It will suffice to state one. Calculation of change in the period of production, however defined and measured in such a system, cannot take cognizance of the role of extra-marginal materials in capital creation. It is therefore necessary to examine other tools and, as will become apparent, to devise new ones. I shall confine the discussion, for the time being, to a two-agent system.

II

Professor Hicks has discussed the problem of capital accumulation under the assumption that we can take as a datum what agent will be augmented. (This, of course, is not the case in real life or in the model discussed in the present paper.) Under this assumption he has advanced the proposition that, under conditions of constant (technical) returns to scale, the effect of net investment may be measured (or expressed) simply by reference to the elasticity of substitution between agents.[10] This amounts to an assumption that the effect of change in relative agent quantities upon relative distributive shares is the same, whether or not total productive capacity of the system (i.e., total income[11]) re-

[9] The case of materials which are drawn *within* the margin and come to have value without the application of services of existing agents to them is thus excluded for the time being—for, as is pointed out in Part IV, such materials are really new agents.

[10] J. R. Hicks, "Distribution and Economic Progress: A Revised Version," *Review of Economic Studies*, IV (1936–37), 3.

[11] By "income," here and below, I mean simply the rate of flow of psychic income at any given moment in time. What can be meant by measurement of income for the system as a whole is discussed below.

mains constant. This, of course, is incorrect. Any finite change in total income may (and presumably will, as Professor Knight has so often vigorously remarked[12]) have an effect of its own upon relative demand for agents and hence upon distribution. As the system moves from one income level to another, we move from one curve of elasticity of substitution to another and differently shaped one; and to speak of the "elasticity of substitution" is at best ambiguous.

In analyzing the effect of net investment upon the distribution of income, we must *explain* what agent or agents will be augmented, and in what amount. We have two factors to deal with on the demand side: (1) the elasticity of substitution between agents at a given income level and (2) the effect of change in income upon that function. On the supply side there are corresponding influences: (3) the relative augmentability of agents and (4) the effect of augmentation upon that relative augmentability. These four factors will be analyzed.

Use of the concept of elasticity of substitution requires analysis of what is meant by constancy of income for the system as a whole, when agent quantities change. Defining constant income as constant physical output is inadmissible, both because the one is not equivalent to the other, if distribution of the output among consumers changes, and because we cannot assume physical output constant if relative quantities of agents change. Substitution of one agent for another will change the relative costs of production of various "goods" (various satisfactions) and so will cause changes in consumers' choices, hence in physical output. "Constant total physical output" is then meaningless. For the same reason we cannot properly assume constant output of all "products" except one and analyze changes in that one. Output of other products will not remain constant.

Nor will it do to use some empirical measure of constant income, such as constant total money value of current consumption income or of current productive services or of productive agents, the quantity of money and its velocity being assumed constant.

[12] See, e.g., his article cited above in *Econometrica*, VI, 78.

With changes in productive combinations no valid comparison of monetary velocity, hence no assumption that it remains unchanged, is possible.

Unless we assume that all individuals possess the various agents in the same ratios and have demand functions of the same shapes, changes in agent proportions affect individual incomes differently. We may have unchanged income for some individuals, increase in income for some, decrease for others. Even here, however, quantitative comparison between individual incomes or changes in them being impossible, it is meaningless to say that for the system as a whole income has not (or has) changed.

What we come back to is thus the simple and familiar proposition that, for precise determination of the value relationships which will exist at any moment, we must treat every individual separately. Such discussion, individual by individual, is, however, too complex for presentation. It is therefore desirable to summarize the analysis in terms of the system as a whole by flatly assuming measurement of income for the system as a whole. We should realize, however, what that procedure consists of. It consists of thinking of the system we are analyzing as a physical model, mechanically interconnected, so that there is only *one* measurement of income quantity. Yet we must assume separate individuals acting independently, or our analysis of equilibrium becomes meaningless. This is paradoxical. Still, the use of such a model, with irreconcilable assumptions, is necessary if analysis is to be fruitful. We must remember in using the model that it is only a convenient substitute for analysis in terms of individuals; and we must manipulate it only in ways relevant to the processes of change brought about by the action of separate individuals.

If we assume constancy of income, we accept by assumption the curve of elasticity of substitution and the isoquant,[13] or constant-

[13] In deference to common usage I use "isoquant" rather than "indifference curve," since we are dealing with agents rather than with "consumers' goods." It seems worth noting, however, that consumers' goods are productive agents. What any agent produces is "satisfaction" or "psychic income." Analytically, productivity is utility. The distinction in usage between indifference curves and isoquants should be eliminated.

output curve, from which the curve of elasticity of substitution is derived.

It is now necessary to introduce some new technical devices. In Figure 1, measure quantities of the two agents X and Y along OX and OY, respectively. I_1, I_2, and I_3 are isoquants (or, as I shall prefer to call them, constant-income curves). Let points on the curve CC indicate alternative amounts of X and Y, respectively, which can be created with expenditure of a given total of productive services. Movement along CC indicates what amount of Y can be created at the sacrifice of production of the indicated

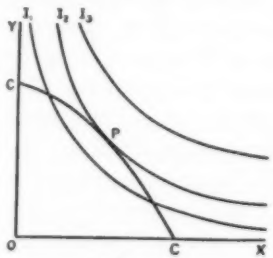

FIG. 1

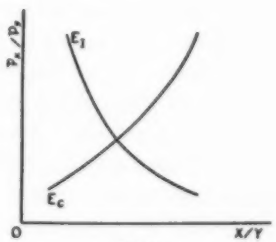

FIG. 2

FIG. 1.—Constant-income and constant-capital-cost curves

FIG. 2.—Relative-supply and relative-demand curves

amount of X, or vice versa. CC is thus an "indifference agent-supply curve," or a "constant agent-cost curve" or, if you choose, a "constant-capital-cost curve" (all agents being, in fact, capital). The slope of CC at any point thus represents the marginal rate of substitution between X and Y which will cause the indicated amounts of X and Y, respectively, to be produced, given the amount of investment indicated by CC.

The reality of the constant-capital-cost curve as a "transformation curve"—a statement of the ratios at which existing amounts of X may be transformed into Y and vice versa—is subject to qualification.[14] More significant for our purposes is the fact that,

[14] It depends (1) upon the not very useful assumption of instantaneous convertibility of X into Y or vice versa or (2) upon the assumption that over a time interval of some finite length the one agent is convertible into the other by a process of dis-

as net investment occurs, very real choice exists between augmenting X in greater or less degree and Y in less or greater degree. Thus, as one moves from a given point of equilibrium to an infinitesimally higher constant-capital-cost curve, the segment of the higher curve in the neighborhood of the point of departure is very real. It is the curve visualized in this way with which we are concerned. The slope of the curve depends upon the quality of the available extra-marginal materials needed to augment the quantity of X, as compared with the quality of those available which are needed to augment the quantity of Y.

Since X or Y can be produced, as an alternative to the other, only at increasing cost in terms of services of the other[15] at all points along CC, CC will be concave with respect to the origin along its entire length. The limiting case is straightness. CC cannot be convex with respect to the origin, by virtue of the fact that the least-cost possibility of augmenting an agent will be selected before any higher-cost possibility. The constant-income curve is, of course, convex with respect to the origin. Hence the two curves can be tangent at only one point, whose location is determined by the shape of the curves. That point of tangency represents greater income than any other point on CC, since other constant-income curves which cut CC are lower curves. Hence it represents the most preferred among the possible X–Y combinations. Assuming for the moment that there is no further tendency toward net investment when investment has reached the constant-capital-cost

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investment and reinvestment. In this case the shape of the curve will depend upon the length of the time interval during which we allow the process of conversion. Only in case conversion of X into Y, over a given arc MM' (not shown on the figure), is possible at the same ratio of sacrifice (gain) of X to gain (sacrifice) of Y as the conversion of Y to X, over the arc $M'M$, will the transformation curve be the same regardless of the direction of movement. Only in this case will elasticity of substitution along this curve be symmetrical. There is no ground, either a priori or empirical, for the assumption that this is true.

[15] This is equivalent to saying that each can be increased only by resorting to the use of increasingly inferior qualities of extra-marginal material; for the quality of a given increment of extra-marginal material is defined by consideration of the quantity (value) of existing agents which must be applied to it to produce a given increment of productive capacity.

curve CC, there is stationary equilibrium at the point where CC and a constant-income curve are tangent, as at P. Only the combination of quantities of X and Y represented by that point will (assuming correct foresight, of course) come into existence.

In Figure 2 measure p_x/p_y—the marginal rate of substitution between X and Y—along the vertical axis—the ratio of the quantity of X to that of Y along the horizontal axis. If values are read off onto this graph from I_2 on Figure 1, the curve secured on Figure 2 (E_I) is, of course, the familiar "elasticity of substitution" curve. For the moment, let us call it an "income elasticity of substitution" curve. If we similarly read off the p_x/p_y and X/Y values along CC on Figure 1 and plot those values on Figure 2, we secure a curve (E_C), which we may call the "cost elasticity of substitution" curve. It is positively inclined. The point of intersection of E_I and E_C is the point of tangency of I_2 and CC on Figure 1. The similarity between these elasticity curves and traditional supply-and-demand curves goes deeper than their shapes on the graph. Our curve E_I tells us what ratio between the quantity of X wanted and the quantity of Y wanted is associated (at the given level of income) with each given marginal rate of substitution between X and Y. That is, it tells us what demand for X (in terms of Y) is associated with each given price of X in terms of Y. It is a "relative-demand curve" and may very appropriately be termed that, instead of being referred to as an elasticity of substitution curve. (The elasticity of the curve may then be referred to as the "elasticity of relative demand.") Likewise, the curve E_C tells us what ratio between the quantities of X and Y will be produced at each given marginal rate of substitution. It is a "relative-supply curve," and its elasticity may be referred to as the "elasticity of relative supply." It is clear that what we have done is simply to reinstate the whole of "supply-and-demand" analysis in proportional, or relative, terms, thus freeing it from the faulty assumptions associated with it in its absolute guise and from their consequences. Further, we have applied it to general equilibrium (in a system with only two agents). This formulation of relative supply-and-demand curves would seem to be a new analytical tool well worth investigating.

One difficulty concerning the graphic representation of the relationships between relative supply and demand needs discussion. Since the shape of the relative-demand curve changes with change in income, any one curve can apply to only one income level (save by coincidence). And, since the surface with co-ordinates p_x/p_y and X/Y provides no method of indicating amount of income, it would seem that each plane with these co-ordinates must bear only one relative-demand curve. Income (or at least rank of successive incomes) should then be indicated on a third dimension, relative demand at successively higher incomes thus being indicated on planes lying successively behind each other. This is an entirely reasonable representation. It should be noted further that the curve portraying relative supply cuts through a number of different income levels and that therefore on this three-dimensional graph it will extend in all three dimensions, touching the plane of the relative-demand curve with which it establishes equilibrium only at its point of intersection with that curve. However, these facts constitute no bar to our casting the *projection* of the relative-supply curve upon the relevant income-plane, in order to examine readily its relationship to the p_x/p_y and X/Y axes, as long as we remember that our graph does not mean that all points on the (projected) relative-supply curve yield the same income. Further, there is no reason why we should not superimpose all our income-planes upon one, so that we may the more readily compare the positions of the successive curves. We must then *label* the curves relevant to successively higher incomes, since we have no other way of identifying them. This procedure is the more desirable, since locating them on successive planes along an income axis may suggest that we are measuring the quantitative difference between the successive incomes, whereas even our use of income elasticity of demand, defined below,[16] will not imply that we can compare the magnitudes of successive differences between each pair of a series of successively larger incomes.

Thus far we have been considering only stationary equilibrium. The concept of stationary equilibrium, however, seems inapplicable to the process of capital accumulation in a system such as that

[16] P. 848.

described here, except under special assumptions. In human experience net investment does not seem to lead to a new stationary equilibrium. Investment continues and, it would seem, may be expected to do so throughout any foreseeable future.[17]

However, if all individuals are perfectly informed, there is equilibrium at each moment *during the process of net investment*, not only in the sense that reaction equals action, but also in the sense that, though the position of equilibrium will change from moment to moment, no individual, even if he had the opportunity, would recontract (then or earlier) and thus change values and agent quantities at that moment. This moving equilibrium can be located in terms of constant-income and constant-capital-cost curves. We need simply recognize the obvious fact—recognized by Walras and stressed by Professor Knight—that capital accumulation gives an individual satisfaction equivalent to that of current consumption. If an individual who possesses quantities of X and of Y uses them in part for construction of added quantities of X and Y at any given moment, instead of wholly to furnish current consumption, the balancing of alternatives in his mind is current, instantaneous, all in the present, just as it is in the case in which his income is made up wholly of current consumption. Thus the income represented by each of our constant-income curves may be taken to include the psychic income derived from capital accumulation proceeding at the instant.[18]

If we can devise functions for analysis of the movement of the constant-income and constant-capital-cost curves as time progresses, we may recognize, as influences affecting their shape and location, all factors which change with the passage of time, in-

[17] Whether or not investment tapers off to a new stationary equilibrium in one's model depends upon one's assumptions concerning the effect of investment and income growth upon population, the effect of change in income per person upon the propensity to invest, and the reaction upon the propensity to invest of declining rate of return upon investment. If the flow of investment does approach zero, it will do so asymptotically through time.

Professor Knight has argued—most explicitly in conversation—that, where time enters in this way, the concept of stationary equilibrium is inapplicable, whether or not the movement approaches a static stage through time.

[18] This, of course, is only a formal and not a substantive solution to the problem. It does not seem necessary to pursue the problem further here.

cluding human wants and productive methods. The path of movement of the point of equilibrium, from the origin to any point on the graph, represents the historical movement of value relationships from the origin of the economic system to the given moment in time.

In a system in which investment continually proceeds, the position of the constant-income curve at any moment is uniquely correlated with the size of the current income flow, and the position of the constant-capital-cost curve at any moment is uniquely correlated with the cumulative amount of investment up to that moment.[19] Hence the functions by which the changes in location of the two curves are to be represented may properly state those changes purely in terms of changes in amount of income and in cumulative amount of investment. Two functions must be defined.

One, which we may call the partial income elasticity of demand, would be defined by parallel with other elasticities now familiar, as the proportional increase which a given small increase in income would bring in the quantity of an agent demanded, if the marginal rate of substitution between the two agents remained constant, divided by the proportional increase in income. We want, however, not the value as measured over a small interval, but the limit to which that value approaches as the increase in income being considered approaches zero as a limit; that is, we want the "point" elasticity.[20]

One difficulty concerning the concept of income elasticity of demand may be discussed. Its measurement involves measurement of the proportional increase in *real* income; but that increase, by causing a change in the composition of the income stream, destroys the unit in which measurement might be made. However,

[19] Only the segment of each curve in the neighborhood of the point of equilibrium can be located; but this, of course, is the only segment of significance.

[20] It will be noted that the definition refers to the demand for services of an agent, not to the demand for consumption services. We thus by-pass the problem of the relationship between change in demand for consumption services—the primary phenomenon—and change in demand for agent services—the derived phenomenon. This relationship, while complex, offers no analytical difficulty and need not be considered here.

the fact that we are concerned with point elasticity obviates the difficulty. Let us begin with any reasonable empirical measure of the proportional increase in real income.[21] The measurement will involve error, of course. As we allow the increment of income to approach zero as a limit, our figure for income elasticity of demand approaches a limit, the error in our calculation of the amount of increase in income simultaneously approaching zero. This limit is the income elasticity of demand at the given point, the value which we may properly use in our analysis.[22]

The second function which we need is the "partial investment elasticity of supply" of an agent, which by parallel with customary usage, would be defined as the proportional increase in the quantity of an agent which a small increase in investment would bring if marginal rates of substitution remained constant, divided by the proportional increase in the quantity of all (in this case both) agents.[23] Again, however, it is the "point" elasticity which we shall use. Measurement of the proportional increase in the quantity of all agents offers the same difficulty as measurement of the proportional increase in total income. The difficulty may be met in the same way. For convenience, partial income elasticity of demand will hereafter be referred to simply as "partial income

[21] We may (if we assume we know the relevant relative-demand curves) define an income increased by k per cent as one which would be desired equally with an income in which every service of the old income was increased by k per cent. Or we may (*a*) note the number of units by which certain consumption-services have been augmented in quantity and others diminished between two levels of income; (*b*) summate the unit values at the former income level of services augmented (measured in some *numéraire*) times number of units augmented minus the similar products for services diminished; (*c*) calculate the ratio of this figure to value of total income in the old equilibrium, similarly computed; and (*d*) take this ratio as the proportionate increase in real income; or we may apply Fisher's "ideal formula."

[22] Compare the instantaneous price index of F. Divisia, *Economique rationelle* (Paris, 1928), p. 268; see also Griffith C. Evans, *Mathematical Introduction to Economics* (New York, 1930), p. 101. For reference to these sources I am indebted to Professor Oscar Lange.

[23] Marginal rates of substitution might remain unchanged if demand changed just sufficiently to counteract changes in relative agent quantities. The amount of increase in each agent will then depend upon the speed with which the cost of production of each agent increases, as augmentation occurs. Partial investment inelasticity of supply thus measures the relative augmentability of the agents.

elasticity," and partial investment elasticity of supply as "partial investment elasticity."

The graphic representation of these functions perhaps needs comment. Partial income elasticity of unity shows itself, on the graph of the constant-income and constant-capital-cost curves, in that each constant-income curve is a replica on a larger scale of each lower one. Suppose straight lines are drawn out from the origin, so that every point on any given one of the lines represents the same ratio of the quantity of X to that of Y. Such lines may be called "constant agent-ratio lines." If there is partial income elasticity of unity, the slopes of all constant-income curves at their points of intersection with a given constant agent-ratio line are the same, that is, regardless of the income level, the same proportion of agents is associated with the same marginal rate of substitution. This means, of course, that on the graph of the relative-demand and relative-supply curves the location of the relative-demand curve is identical for all incomes. Partial income elasticity for X greater than unity means that a given slope on each constant-income curve is associated with a higher ratio of quantity of X to that of Y than on the curve below. A line drawn upward through points of the same slope on successively higher curves bends continually to the right. On the graph of the relative-demand and relative-supply curves this association of a given value of p_x/p_y with an increasing value of X/Y means that the relative-demand curve is moving to the right as income increases. The relation to the traditional demand-curve graph is obvious. An increase in (relative) demand (for X) means a movement of the (relative) demand curve to the right. Partial income elasticity for X of less than unity means, of course, that, as income increases, the relative-demand curve moves to the left. The same observations hold, *mutatis mutandis*, for the graphic representation of partial investment elasticity.[24]

[24] These changes in location of either the relative-demand or the relative-supply curve involve changes in the magnitude of elasticity at any point on the curve. Movement to the right, by increasing the value of X/Y associated with any given value of p_x/p_y, decreases the elasticity (whether of relative demand or of relative supply) at any point, and movement to the left increases it. This effect must be taken account of in every case of movement of either curve in determining the position of the new equilibirum.

III

We may now analyze the effect of net investment and increase in income upon marginal rate of substitution, relative agent quantities, and distributive shares.[25] It should be remembered that we are dealing with a two-agent system and are assuming that no new agents appear. When an income or investment elasticity is mentioned without reference to either agent, it should be understood that the agent X is referred to.

Case I.[26]—If the elasticity of relative demand equals infinity, partial income elasticity is clearly meaningless. However, this does not necessarily mean that the two agents are physically identical. They may merely be identical in all qualities now in use. Partial investment elasticity will still have meaning in this case. The change in distributive shares brought about by investment will depend solely upon partial investment elasticity. If new wants or new production methods appear, as investment occurs and income increases (and time passes), demand may be created for new functions which one agent may be able to perform in superior degree. The marginal rate of substitution between the two agents will then cease to be constant, elasticity of relative demand for them will cease to be infinite, and the two agents will have to be treated as separate agents, as in Cases II–V below.

Case II.—If partial income elasticity and partial investment elasticity are both unity, the value of elasticity of relative demand and that of elasticity of relative supply are immaterial. Neither curve moves; and marginal rate of substitution, relative agent quantities, and distributive shares will remain constant as investment proceeds.

Case III.—If partial income elasticity equals unity, the relative-demand curve does not move as income increases. Thus, as the relative-supply curve moves (if it does), the equilibrium point will

[25] By "share," here and below, I mean "relative share" or fraction of the entire income, not absolute share.

[26] The analysis from this point on may often seem formidably abstract. For precision it must be stated in formal terms. The reader should visualize it in terms of (1) relative difficulty of augmenting agent quantities, (2) changes in that relative difficulty as investment proceeds, (3) relative demand for agents, and (4) changes in that relative demand due to changes in consumers' wants as income increases. The analysis will be more meaningful for some readers when translated into these terms.

move along the stationary relative-demand curve. The change in equilibrium position will be determined by the shape of the relative-demand curve and by the shape and distance of movement of the relative-supply curve. Assume, first, that elasticity of relative demand for X is unity all along the curve. Then, if partial investment elasticity is greater than (less than) unity, investment will increase (decrease) the relative quantity of X and decrease (increase) the marginal rate of substitution by such amounts that the distributive share of X is constant. The shape and movement of the relative-supply curve will not affect X's relative share.

Suppose, instead, that elasticity of relative demand for X is greater than unity over that segment of the relative-demand curve over which the point of equilibrium moves. Then, if partial investment elasticity is greater than unity, investment will increase the relative quantity of X, will decrease the marginal rate of substitution at a slower rate,[27] and will thus increase the share of X. The greater the partial investment elasticity, the greater the increase in X's share. If, with elasticity of relative demand greater than unity, the partial investment elasticity of X is less than unity, the effect of investment upon the relative quantity of X, upon marginal rate of substitution, and upon X's share will be the reverse. The less the partial investment elasticity of X, the greater the decrease in X's share.

If, on the other hand, the elasticity of relative demand for X is less than unity along the relevant segment of the curve, relationships between the change in relative quantity and that in marginal rate of substitution are reversed. Thus, if partial investment elasticity is greater than unity, investment will increase the relative share of X, will decrease the marginal rate of substitution between X and Y at a faster rate, and will decrease X's share. Opposite results follow if partial investment elasticity is less than unity. Whether elasticity of relative demand is greater or less than unity, the further its value is from unity, the greater the change in X's share will be in each case.

[27] The comparison is between instantaneous rates, not between average rates over a finite interval. In the latter case the share of an agent is increased if the ratio of the new (increased) quantity to the old is greater than the inverse of the ratio of the new (decreased) marginal rate of substitution to the old.

Elasticity of relative demand may be increasing or decreasing as the relative quantity of X (on the given relative-demand curve) increases. The change in the magnitude of this elasticity will have obvious effects upon the rates of change of the magnitudes discussed above. And if, during the process of investment, the point of equilibrium moves past the point on the relative-demand curve at which the elasticity of relative demand crosses unity, the direction of change in the distributive share of X will be reversed.

In all these instances within Case III the greater the elasticity of relative supply of X (i.e., the more nearly horizontal the relative-supply curve), the less the movement of the equilibrium point along the relative-demand curve, hence the less the change in marginal rate of substitution, relative quantity, and distributive share of X (and of Y). For high elasticity of relative supply exists only if the relative difficulty of increasing the quantity of X (or Y) does not increase rapidly with increase in the proportion of a given increment of investment which is devoted to producing that factor instead of the other. Hence, if partial investment elasticity of X is greater than unity, the fall in relative price of X (increase in relative price of Y) will readily divert investment from production of X to production of Y, thus retarding both the increase in X's relative quantity and the fall in its relative price.

Case IV.—If partial investment elasticity of X is equal to unity, the relative-supply curve remains fixed as income increases, and change in equilibrium consists of movement of the equilibrium point along that curve. If partial income elasticity is greater or less than unity, the relative-demand curve will move; and, in response to the demand-caused price change, substitution between agents will occur. Given the slope of the relative-supply curve, that of the relative-demand curve determines how far along the relative-supply curve a given movement of the relative-demand curve will cause the point of intersection to move. The greater the elasticity of relative demand, the less will be the movement of the point of intersection.

If partial income elasticity for X is greater than unity, the increase in relative demand for X will increase the marginal rate of substitution, the relative quantity of X, and X's distributive

share. If partial income elasticity is less than unity, the decrease in relative demand will decrease each of the three. The further from unity the value of partial income elasticity for X is, the greater the change in the three magnitudes. In the one limiting case—partial income elasticity for X of positive infinity—the proportion of X to Y wanted at the given price becomes infinite as income increases. However, X does not replace Y completely, unless the elasticity of relative demand for X is zero over the segment of the curve above the equilibrium point. The same reasoning, *mutatis mutandis*, applies to partial income elasticity of negative infinity.

If elasticity of the relative-supply curve equals unity all along the curve, the ratios of change in relative quantity and in marginal rate of substitution will be equal. If elasticity of the curve is greater than unity over the segment of the curve over which the point of equilibrium passes, then, if partial income elasticity is greater than unity, relative quantity is increasing faster than marginal rate of substitution; while, if partial income elasticity is less than unity, relative quantity is decreasing the faster. If elasticity of the curve is less than unity over the relevant segment of the curve, then marginal rate of substitution is changing more rapidly than relative quantity. In either case the further the value of elasticity of the relative-supply curve is from unity, the greater is the difference between the two rates of change.

Case V.—The final possibility is that neither partial investment elasticity nor partial income elasticity is equal to unity, so that both the relative-demand curve and the relative-supply curve are moving as investment proceeds and income increases. While this situation is more complex than those discussed above, many of the details discussed above apply and need not be restated.

If both partial investment elasticity and partial income elasticity are less than unity (relative-demand and relative-supply curves both moving to the left), the relative quantity of X is decreasing; and presumably[28] the marginal rate of substitution

[28] "Presumably" here means that if among all possible combinations of the value of elasticity of relative demand and that of elasticity of relative supply a combination were drawn by chance, the probability that it would be a combination which

is increasing at a slower rate or is constant or decreasing, so that the share of X is decreasing. But the marginal rate of substitution may be increasing sufficiently fast so that X's share is increasing.

If both partial income elasticity and partial investment elasticity are greater than unity (relative-demand and relative-supply curves both moving to the right), the relative quantity of X is increasing; and presumably the marginal rate of substitution is decreasing more slowly or is constant or increasing, so that X's share is increasing. But the marginal rate of substitution may be decreasing sufficiently fast so that X's relative share is decreasing.

If the partial investment elasticity is greater than unity and partial income elasticity is less than unity, the marginal rate of substitution is decreasing, and most probably the relative quantity is increasing at a slower rate or is constant or decreasing, so that X's share is decreasing. But X's relative quantity may be increasing sufficiently fast so that its relative share is increasing.

And if partial investment elasticity is less than unity, while partial income elasticity is greater than unity, the marginal rate of substitution is increasing; and most probably the relative quantity of X is decreasing at a slower rate or is constant or increasing, so that the relative share is increasing. But X's relative quantity may be decreasing sufficiently fast so that its relative share is decreasing.

In each case, whether the typical or the exceptional event occurs depends upon the slope and the rate of movement of the relative-demand curve and the relative-supply curve. The graphical analysis is so similar to traditional supply-and-demand analysis that it is unnecessary to elaborate further here.

It is interesting to note, however, that the movement of the point of equilibrium on the graph of the relative-demand and relative-supply curves indicates the change in X's relative share. If the movement is to the right and the point elasticity of the path of movement (instantaneous rate of change in X/Y, divided by instantaneous rate of change in p_x/p_y) is algebraically less than

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would cause the rate of increase in the marginal rate of substitution to be less than the rate of decrease in the relative quantity of X is greater than $\frac{1}{2}$.

negative unity (a negative value greater than unity) or if the point elasticity of the path of movement is algebraically greater than negative unity but movement is to the left, then X's relative share is increasing. If the elasticity of the path of movement equals negative unity, X's share is constant, while if it has a value above negative unity with movement to the right or has a value below negative unity with movement to the left, X's share is decreasing. Similarly, the arc elasticity of the path of movement over any given interval (proportional change in X/Y, divided by proportional change in p_x/p_y) indicates the direction of change in X's share over that interval.

IV

In conclusion, some comment upon the restrictive assumptions so far employed is in order. The assumption of perfect competition (i.e., pure competition plus perfect foresight) is, of course, severely restrictive. It does not, however, seem appropriate to prolong this article by discussing the application to the analysis made here of the theories of monopoly and monopolistic competition or of recent analysis relating to imperfect or uncertain foresight.

Something may well be said, however, about the effect of removal of the assumptions (*a*) that only two agents exist in the system and (*b*) that no new agents are produced. So far we have assumed a system in which only two agents exist. A system of three agents may be represented on a three-dimensional figure. The constant-income curve of the two-dimensional figure will be replaced by a constant-income surface, convex to the origin at all points; and the constant-capital-cost curve will be replaced by a constant-capital-cost surface, concave to the origin at all points. For a system of more than three agents we must visualize a figure with as many dimensions as there are agents, each dimension being at right angles to all the others. The constant-income surface will, of course, extend in every dimension and will be convex to the origin (and to every axis); while the constant-capital-cost surface will be similarly multidimensional and concave to the origin (and to every axis). Hence, no matter whether there are three dimensions or a greater number, a given constant-income

surface and a given constant-capital-cost surface can be tangent at only one point. This point is the point of equilibrium. As investment proceeds and income increases, the movement of the point of equilibrium and of marginal rates of substitution, relative agent quantities, and distributive shares will be determined by the change in relative demand for the various agents and by their relative ease of augmentation.

Thus there is no difficulty in conceiving of equilibrium and its movement in a system of many agents. The difficulty of expressing the determinants of equilibrium, however, is enormous. The shape of the constant-income surface can be stated only in terms of the partial income elasticity of substitution between each pair of agents in the system, the quantity of all other agents being held constant.[29] This measure may be termed the "specific income elasticity of substitution." Likewise, the shape of the constant-capital-cost surface can be stated only in terms of all the specific investment elasticities of substitution between all the pairs of agents in the system. Again, the income elasticity of demand for any one agent will depend upon the demand for all other agents and the investment elasticity of supply for any agent, upon the augmentability of all other agents.

Thus treatment of a many-agent system becomes almost hopelessly complex. To reduce the analysis to manageable proportions it becomes necessary to treat of one agent in relation to all others taken as a group. In doing so we run into the difficulty that the agents of the group cannot be assumed to change in quantity in equal ratios as investment proceeds. Hence for any finite amount of investment no ratio of change in the ratio of the quantity of the single agent to that of the group can be properly determined.[30] However, the difficulty can be met, I believe. Take the elasticity

[29] The implication must be carefully avoided that, while the relative quantity of two agents changes, the quantity of other agents can conceivably be regarded as remaining constant.

[30] Mr. Hicks notes this difficulty (*op. cit.*, pp. 1–10). He meets the problem with regard to "elasticity of substitution" by a mathematical formulation which is, however, an approximation; which calculates "elasticity of substitution" in the early, faulty way, namely, without holding total product (i.e., income) constant; and which makes "elasticity of substitution" depend upon the "elasticity of supply" of each agent. "Elasticity of supply" is not defined.

of relative demand for the single agent in terms of the group as an example. Let us calculate it for some finite amount of change in the quantity of the single agent and in that of the agents composing the group. We may calculate a ratio of change for the group as a unit in some empirical way, as we did above (in connection with income elasticity of demand) for change in income. Then, as we let the amount of change approach zero as a limit, the change in the composition of the group approaches zero as a limit; so also does our error, and the point elasticity of relative demand would seem to possess validity which that measured over any finite interval does not.

Similar procedure may be followed in determining investment elasticity of substitution. Thus we can conceive of equilibrium in value and quantity between the single agent and the group at any given level of income. It thus becomes plausible to simplify the presentation by making the treatment of a many-agent system analogous to that of a two-agent system.[31]

The other simplifying assumption to be considered is that investment creates no new agents. An agent, of course, is a group of productive items or units which are homogeneous in the sense that each will perform every function in production that any other will perform. That is, elasticity of relative demand for the items is infinite. Now the production of new productive capacity is not ordinarily the production of agents identical in function with some existing agent. For example, as extra-marginal soil comes within the margin, the new land created will be combined with existing agents—tractors, plows, labor, etc.—in different proportions from old land when used in production. Hence new and old land—"poorer" and "better" land—will not rise or fall in price together as the ratio between their quantity and that of other agents changes. They are distinct agents. Similar reasoning applies to all "low-grade" materials which come into use. In fact, by simi-

[31] I must confess to some uncertainty concerning the validity of the procedure sketched here. Even if it is invalid, however, discussion of the effects of investment in terms of a two-agent system is justifiable. It gives a manageable portrayal of the effects of investment, by which one may understand the nature of its effects in a many-agent system, even though the analysis of the movement of equilibrium in a system of the latter sort is so complex as not to be presentable.

larly rigorous reasoning almost every productive item is a separate agent. Almost no item is economically duplicable in exact function. Each item is a fixed-supply good, and investment in reality produces new agents, different in an infinite variety of degrees from the old.[32] It is truer to reality to think of the economic system in this way than to think of investment as producing added quantities of existing agents.

Nevertheless, use of the latter assumption in one's analytical model seems justifiable. Its justification is twofold. First, agents produced by investment ordinarily have such high elasticity of substitution (i.e., relative demand) with some existing agents that no great violence is done to the analysis if we consider them a single agent. Of course, distortion is then involved in drawing dividing lines between agents, since all shade into all. However (and this is the second justification), movement of equilibrium in a system in which investment produces new agents is utterly unanalyzable by tools which the science possesses at present. To measure the elasticity of relative demand between an agent and any other at the moment the first increment of the given agent is being produced is nonsense, for the rate of increase in its quantity is infinite and there simply is no marginal rate of substitution whose rate of change can be computed. The same applies to elasticity of relative supply.

It is possible, of course, that some functions can be devised to express the change in value relationships between each pair of existing productive items—and between each existing item and a new item—caused by production of the new item. Or perhaps it would be proper to think of a continuous productive surface (or multidimensional productive mass), shading in nature by infinitesimal degrees in every direction from any point and to treat of value changes by some topological device. Such analysis might be highly desirable. At present, however, the conclusion may be ventured, tentatively, that analysis of the sort described herein gives us a model better adapted to illustrate certain processes at work in the real world than any other available.

[32] This, I suspect, is what Mr. Knight has in mind when he attacks the concept of factors of production (see his "Reply to Mr. Kaldor," *op. cit.*, pp. 78–81).

MONOPOLY SUPPLY AND MONOPSONY DEMAND

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THE purpose of this paper is to develop new concepts of supply and demand for analysis of monopoly and monopsony. Obviously, a monopoly has no supply schedule exactly corresponding to that of an individual competitive firm or of a freely competitive market. Similarly, a monopsony has no demand schedule of purely competitive type. It remains to be shown, however, that under particular conditions monopoly supply and monopsony demand can be expressed as specific price-quantity schedules of a new type, and that each of these schedules can be graphically represented not by a single curve but by a family of curves.

For specific insight into a new monopoly supply concept let us consider in Figure 1 a particular monopoly's short-run average-cost curve cc' and a family of short-run constant-net-revenue curves, s_1s_1', s_2s_2', etc., arrayed in orderly succession above the average-cost curve cc'. The curves s_1s_1', s_2s_2', etc., in Figure 1 are so constructed that any rectangle such as *EFGH*, drawn upon the y-axis with its lower right-hand corner on the average-cost curve cc', is constant in area as long as the rectangle's upper right-hand corner remains on any given curve in the series s_1s_1', s_2s_2', etc. A scale of quantities is measured along the horizontal axis of Figure 1; a scale of prices, average costs, and average revenue, along the vertical axis. Thus it may be easily seen in Figure 1 that any rectangle such as *EFGH*, constructed in the manner already described and located in any specific position, represents the total net revenue derived by selling a particular quantity of goods at a particular price. In Figure 1 any rectangle of the given description represents a constant amount of total net revenue as the rectangle's upper right-hand corner moves along the same curve. It follows, therefore, that any given curve in the series, s_1s_1', s_2s_2',

etc., in Figure 1, shows the different prices at which different amounts of total output must be sold to yield under the given cost conditions a particular constant amount of total net revenue. Any such curve[1] is designated in the present analysis a "constant-net-revenue curve."

In the family s_1s_1', s_2s_2', etc., in Figure 1, curves closer to the average-cost curve cc' obviously refer to smaller amounts of total net revenue; curves farther away from the average-cost curve, to

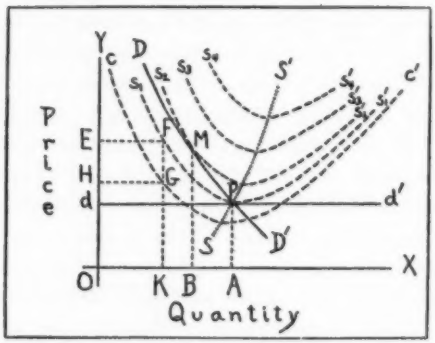

FIG. 1.—Monopoly supply

larger amounts of total net revenue. In Figure 1 a constant-net-revenue curve exactly coinciding with the average-cost curve cc' represents prices which just cover costs—i.e., prices which yield a total net revenue of zero. A series of negative constant-net-revenue curves ("constant-loss curves") may be added in Figure 1 below the average-cost curve cc'. In accordance with the principles of decreasing and increasing costs the average-cost curve cc' in Figure 1 assumes roughly the form of an upright U. Since the constant-net-revenue curves in Figure 1 are derived from the average-cost curve by a comparatively simple process, the constant-net-revenue curves also are roughly in the form of upright

[1] Cf. the constant-revenue curves (rectangular hyperbolas) used by Alfred Marshall in his analysis of monopoly price, *Principles of Economics* (8th ed.), pp. 479–80 n. Since Marshall's constant-revenue curves are constructed without reference to costs of production, they cannot be directly related to monopoly supply.

U's. Consequently, we have in Figure 1 a nested family of U-shaped curves. These U-shaped curves in Figure 1 approach one another more and more closely on the right—for a very obvious reason. The curves s_1s_1', s_2s_2', etc., in Figure 1 exhibit constant differences in total net revenue. As the quantity of product increases, any constant difference in total net revenue is maintained under the given cost conditions by smaller and smaller differences in price. In the family s_1s_1', s_2s_2', etc., in Figure 1, therefore, each member approaches every other member more and more closely on the right.[2] As a result of the shape of the average-cost curve and the constant-net-revenue curves' approach to one another on the right, each successive higher curve in Figure 1 has its minimum point farther to the right than the minimum point of the preceding lower curve. Thus in Figure 1 the curve SS', the locus of all minimum points in s_1s_1', s_2s_2', etc., has an upward slope to the right.

A "supply-indifference schedule" is defined in the present analysis as "a schedule of different amounts of total individual output at different prices equally satisfactory to a given producer under particular circumstances." A "supply-indifference curve" is defined as "the graphic representation of a supply-indifference schedule." In accordance with these definitions each constant-net-revenue curve in Figure 1 becomes a supply-indifference curve if the given monopoly is motivated entirely by prospects of immediate net revenue. In this case each constant-net-revenue curve in Figure 1 shows different amounts of total output at different prices equally satisfactory to the monopoly by virtue of the equal contemplated amounts of immediate net revenue. Thus in Figure 1 a series of supply-preference levels is marked off in ascending order by the supply-indifference curves s_1s_1', s_2s_2', etc.

[2] If the constant-net-revenue curves in Figure 1 above are extended indefinitely upward to the left, they also approach one another more and more closely on the left. Cf. Marshall's constant-revenue curves (rectangular hyperbolas), *ibid.* Marshall's constant-revenue curves are asymptotic to the x- and y-axes. The constant-net-revenue curves in Figure 1 above are asymptotic to the right- and left-hand branches of the average-cost curve. Because of the U-shape of the average cost curve in Figure 1 above, the approach of the constant-net-revenue curves to one another on the left is less likely to come within the range of actual observation.

The supply attitude of the given monopoly may be further described in Figure 1 by specific supply-indifference curves above and below those actually shown.

The "supply-preference schedule" of any given seller is defined at this point as "a comprehensive series of the seller's supply-indifference schedules arranged in the order of the seller's preferences." It is obvious from the preceding analysis that a particular monopoly's supply-preference schedule under given conditions is graphically represented in Figure 1 by the family of curves s_1s_1', s_2s_2', etc. It does not follow that a monopoly's supply-preference schedule is always derived by the particular methods illustrated in Figure 1. The supply-indifference curves in Figure 1 are also short-run constant-net-revenue curves because the given monopoly is entirely motivated, according to our assumptions, by prospects of immediate net revenue. Monopoly is frequently motivated by additional considerations—e.g., the influence of present prices and production on future net revenue. Under such conditions a monopoly's supply-preference schedule depends upon much more complex calculation and cannot, in general, be represented as in Figure 1 by short-run constant-net-revenue curves interpreted as supply-indifference curves. Furthermore, if costs of production are not definitely known in advance, but are anticipated only in terms of probabilities, definitive constant-net-revenue curves cannot be logically postulated. Supply-indifference curves, derived from given probabilities of cost, must also reflect a given producer's caution or willingness to assume risks.[3] With conditioning influences of this kind there is no assurance that supply-indifference curves possess all the characteristics of constant-net-revenue curves.

On the other hand, it is submitted that typical supply-indifference curves[4] always retained some of the general characteristics of constant-net-revenue curves exemplified in Figure 1. Thus, in

[3] Cf. A. J. Nichol, "Probability Analysis in the Theory of Demand, Net Revenue, and Price," *Journal of Political Economy*, XLIX (1941), 637–61.

[4] A simple and obvious difference remains to be pointed out between the general types of indifference curves employed in the analysis above and the indifference curves originally devised by Professor F. Y. Edgeworth.

the first place, typical supply-indifference curves are roughly in the form of upright U's reflecting the general influence of decreasing and increasing costs. Second, a typical family of supply-indifference curves is a nested family of U-shaped curves. Third, in a typical family of supply-indifference curves the upper members represented higher levels of supply preference; the lower members, lower levels of supply preference. Fourth, members of a typical family of supply-indifference curves approach one another more and more closely on the right because, as output is increased in any given situation, particular differences in supply preference are occasioned by smaller and smaller differences in price. Fifth, as a result of the U shape of supply-indifference curves and their closer approach to one another on the right, each successive member of a typical family has its minimum point farther to the right than the minimum point of the preceding lower member.

Upon the basis of these simple typical characteristics of supply-indifference curves particular deductions may be made in particular analytical problems. The concept of a supply-preference schedule is primarily developed in this article for analysis of monopoly. The concept may also be applied, however, to any individual competitive firm. For the sake of a brief initial comparison let us assume that the supply-indifference curves s_1s_1', s_2s_2', etc., in Figure 1 represent the supply-preference schedule of a particular competitive firm under given circumstances. Let us disregard the fact that s_1s_1', s_2s_2', etc., in Figure 1 are constant-net-revenue curves; but let us assume that s_1s_1', s_2s_2', etc., retain the general characteristics of typical supply-indifference curves previously described. The supply-preference schedule in Figure 1 may then be regarded as a schedule of general type. The amount of product actually offered for sale by the given competitive firm is governed by a competitively determined market price. Let us assume that Od in Figure 1 represents the market price at a particular time. Then in Figure 1 the demand for the given firm's offerings may be represented in familiar conventional form by the horizontal line dd'. Subject to the governing influence of demand dd' in Figure 1, the given firm's greatest attainable supply preference is marked by the tangency of the line dd' to a particular sup-

ply-indifference curve at its minimum point. Thus, in Figure 1 the minimum point P on the supply-indifference curve s_1s_1' determines the quantity OA offered for sale by the given firm when the market price is Od. In this manner it may be shown that the minimum points of different supply-indifference curves in Figure 1, determine the different quantities of product the given firm is able and willing to offer for sale at different market prices. The curve SS' sloping upward to the right in Figure 1 is the locus of the minimum points of s_1s_1', s_2s_2', etc. The obvious conclusion is that SS' in Figure 1 represents the given firm's competitive-individual-supply schedule. In other words, SS' in Figure 1 is the given firm's competitive-individual-supply curve. By the same methods subject to the same general assumptions it may be shown that any individual firm's competitive-supply curve is the locus of the minimum points of the firm's supply-indifference curves. Thus, it may be clearly seen that competitive individual supply, as it is ordinarily understood in theoretical analysis, is always a particular phase of a more inclusive individual-supply attitude. In a particular fundamental sense a competitive firm's supply is of the same nature as a monopoly's supply. In either case the basic specifications of supply may be represented as in Figure 1 by a family of supply-indifference curves.

Now let us apply the technique of supply-indifference curves to a particular problem of monopoly. At this point let us assume that the curves s_1s_1', s_2s_2', etc., in Figure 1 represents the supply-preference schedule of a monopoly under given conditions. Let us assume that the monopoly sells to a group of individual buyers whose total competitive demand is represented in Figure 1 by the curve DD' passing through point P. The demand curve DD' in Figure 1 is tangent to a particular supply-indifference curve at point M. At point M in Figure 1 the monopoly reaches the highest level of supply preference compatible with the demand shown by DD'. Thus, under the given conditions, point M in Figure 1 represents MB, the equilibrium monopoly price, and OB, the equilibrium monopoly output. By the same methods the equilibrium price and output of any monopoly can be determined if the monopoly is governed by a particular supply-and-demand

situation of the general type illustated in Figure 1 by s_1s_1', s_2s_2', etc., and by DD'.

As a result we have a new view of monopoly which supplements the customary analysis in terms of marginal revenue and marginal cost. When a monopoly seeks and obtains greatest possible immediate net revenue, it may be readily granted that marginal revenue, a derivative of demand, is equal to marginal cost, a determinant of supply. In Figure 1, however, a more general equilibrium relationship is exemplified between demand and supply per se. Such a relationship could not be specifically described in the past because it was either explicitly or implicitly assumed that monopoly supply could not be distinctly defined. Monopoly supply, however, can be defined as a schedule of supply preferences. In this sense monopoly supply has, as graphically illustrated in Figure 1, a specific identity of its own emerging out of particular underlying conditions. Thus monopoly price can be reinterpreted as the joint result of two immediate major influences: (1) supply of particular specifications and (2) demand of particular specifications. When monopoly sells to competitive buyers, equilibrium market price is obviously the price of highest supply preference compatible with demand. Price MB in Figure 1 is a specific price determined by supply and demand in accordance with this principle. The interaction of supply and demand, exemplified in Figure 1, is of much greater general significance than equal marginal cost and revenue. In most instances marginal cost and marginal revenue are not the final considerations governing monopoly output and price. Marginal cost, in general, is not the sole determinant of supply. Supply is also governed by (1) the uncertainties of current cost and (2) anticipations of future probblems in production, competition, and demand. In conventional analysis of monopoly, marginal cost is coagent with marginal revenue, but marginal revenue is merely a particular derivative of demand. In Figure 1 marginal cost and revenue are thrust into the background as partial considerations, and fully developed schedules of monopoly supply and competitive demands are shown as price determinants.

In general analysis of the situation represented in Figure 1 the

supply-indifference curve s_1s_1', s_2s_2', etc., need not be continually regarded as constant-net-revenue curves. The same general conclusions follow as long as the curves s_1s_1', s_2s_2', etc., in Figure 1 retain the general characteristics of supply-indifference curves. Thus the exposition is not restricted by the assumption that monopoly seeks greatest possible immediate net revenue. This simplifying assumption is necessary in the conventional marginal cost and revenue analysis. It is obvious, therefore, that the supply-indifference-curve technique exemplified in Figure 1 makes possible a more general approach to monopoly problems. In Figure 1 the monopoly price MB and the competitive price PA can be immediately identified and compared. If the demand curve DD' in Figure 1 moves either to the right or to the left, the resulting changes in price and output can be marked immediately. It may be easily seen in Figure 1 that, if the demand represented by DD' increases, (1) monopoly price and output may both be increased, (2) monopoly output may be increased but monopoly price decreased, or (3) monopoly price may be increased but output decreased—depending upon the slope of the upper and lower portions of the curve DD' in its new position.[5] Many other kindred observations may be made in Figure 1. Thus the supply-indifference-curve technique exemplified in Figure 1 is recommended as generally useful and convenient in the analysis of prices determined by competitive demand and monopoly supply.

A similar technique may be employed in graphic representation of a monopsony situation. For specific illustration of monopsony conditions let us consider in Figure 2 the short-run average-productivity curve pp' and the family of short-run constant-surplus curves d_1d_1', d_2d_2', etc. The curve pp' in Figure 1 shows in terms of money the different average productivity attributed by a monopsony to different quantities of a particular product or service under given circumstances. The curves d_1d_1', d_2d_2', etc., in

[5] Somewhat similar analysis has been presented by Mrs. Joan Robinson in a more comprehensive setting, "Imperfect Competition and Falling Supply Price," *Economic Journal*, XLII (1932), 544–54. Within the pages cited, however, Mrs. Robinson limits her final conclusions to those situations in which the competition of other monopolies forces any given monopoly to return to a price equal to average cost.

Figure 2 are so constructed that any rectangle such as *TUVW*, drawn upon the *y*-axis with its upper right-hand corner on the average-productivity curve pp', is constant in area as long as the rectangle's lower right-hand corner remains on any given curve in the series d_1d_1', d_2d_2', etc. A scale of quantities is measured along the horizontal axis of Figure 2; a scale of prices and average productivity, along the vertical axis. Thus it may be easily seen in Figure 2 that any rectangle such as *TUVW*, constructed in the manner prescribed and located in any specific position, represents

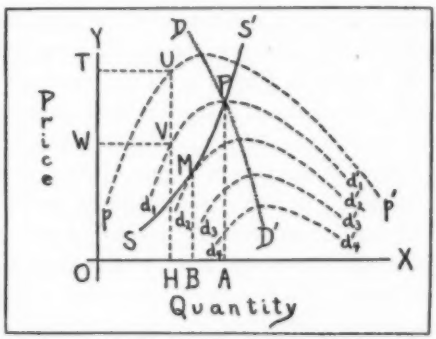

FIG. 2.—Monopsony demand

the total surplus productivity attributed to a particular quantity of product or service bought at a particular price. In Figure 2 any rectangle of the given description represents a constant amount of total surplus productivity as the rectangle's lower right-hand corner moves along the same curve. It follows, therefore, that any given curve in the series d_1d_1', d_2d_2', etc., in Figure 2 shows the different prices the monopsony must insist upon in purchase of different total quantities of product or service, in order to realize a particular constant amount of total surplus values under the given productivity conditions. Any such curve is designated in the present analysis a "constant-surplus curve," or, more definitely still, a "constant-pecuniary-surplus curve" because the surplus is measured in terms of money rather than pure psychological advantage.

With the aid of Figure 2 the analysis of monopsony demand may be continued by methods entirely analogous with those applied to monopoly supply in Figure 1. In certain obvious respects, however, the curves in Figure 2 form a marked contrast with the curves in Figure 1. It has been observed that in Figure 1 a constant-net-revenue curve exactly coinciding with the average-cost curve represents prices which just cover a particular producer's costs. In similar manner in Figure 2 a constant-surplus curve exactly coinciding with the average-productivity curve pp' represents prices which absorb all the productivity attributed by a particular monopsony to a given product or service. In general arrangement and form, however, the family of curves in Figure 2 differs from the family in Figure 1. In the family s_1s_1', s_2s_2', etc., in Figure 1, members farthest above the average-cost curve refer to the largest amounts of total net revenue. If negative constant-net-revenue curves are inserted in Figure 1, these negative curves lie below the average-cost curve. Contrariwise, in the family d_1d_1', d_2d_2', etc., in Figure 2, members farthest below the monopsony's average-productivity curve pp' refer to the largest amounts of total surplus productivity; and, if negative constant-surplus curves ("constant-deficiency curves") are added in Figure 2, these negative curves lie above the monopsony's average-productivity curve. Furthermore, the constant-net-revenue curves in Figure 1 form a nested family of upright $\cup$'s reflecting the general influence of decreasing and increasing costs; but in Figure 2 the monopsony-surplus curves form a nested family of $\cap$'s reflecting the general influence of increasing and diminishing returns. Thus in Figure 2 the diagrammatics of the exposition is turned completely upside down.

At this point, however, a notable similarity may be demonstrated between the monopsony-surplus curves in Figure 2 and the constant-net-revenue curves in Figure 1. It has been observed that the upright $\cup$ curves in Figure 1 approach one another more and more closely on the right. In similar fashion the $\cap$ curves in Figure 2 approach one another on the right—for a very obvious reason. The curves d_1d_1', d_2d_2', in Figure 2 exhibit constant differences in total surplus productivity. As the monopsony increases

the amount of its purchases, any constant difference in total surplus productivity is maintained under the given productivity conditions by smaller and smaller differences in the purchase price. In the family d_1d_1', d_2d_2', etc., in Figure 2, therefore, each member approaches every other member more and more closely on the right.[6]

It has been observed that in Figure 1 each successive higher curve in the family s_1s_1', s_2s_2', etc., has its minimum point farther to the right than the minimum point of the preceding lower curve. In Figure 2, however, because of the ∩ shape of the monopsony-curves and their closer approach to one another on the right, each successive lower curve has its maximum point farther to the right than the maximum point of the preceding higher curve. Thus, in Figure 2 the curve DD', the locus of all maximum points in d_1d_1', d_2d_2', etc., has a downward slope to the right.

A "demand-indifference schedule" is defined in the present analysis as "a schedule of different total amounts of product at different prices equally satisfactory to a given buyer under particular circumstances." A "demand-indifference curve" is defined as "the graphic representation of a demand-indifference schedule." In accordance with these definitions each short-run constant-surplus curve in Figure 2 becomes a demand-indifference curve if the given monopsony is motivated entirely by the surplus productivity of its immediate purchases. Subject to this condition, a series of higher and higher demand-preference levels is marked off downward in Figure 2 by the demand-indifference curves d_1d_1', d_2d_2', etc. The demand attitude of the given monopsony may be further described in Figure 2 by specific demand-indifference curves above and below those actually shown.

The "demand-preference schedule" of any given buyer is defined at this point as "a comprehensive series of the buyer's demand-indifference schedules arranged in the order of the buyer's preferences." It is obvious from the immediately preceding analy-

[6] If the constant-surplus curves in Figure 2 are extended downward to the left, they may also approach one another on the left. Because of the ∩-shape of the average-productivity curve, however, the constant-surplus curves in Figure 2 are less likely to approach one another on the left within the range of actual observation.

sis that a particular monopsony's demand-preference schedule under given conditions is graphically represented in Figure 2 by the family of curves d_1d_1', d_2d_2', etc. It does not follow that a monopsony demand-preference schedule is always derived by the particular methods illustrated in Figure 2. The demand-indifference curves in Figure 2 are also short-run constant-pecuniary-surplus curves because the given monopsony, according to our assumptions, is motivated entirely by the surplus productivity of its immediate purchases in terms of money. Monopsony is frequently motivated by additional considerations—e.g., the influence of present prices and purchases on the surplus productivity of future purchases. Moreover, a monopsony is sometimes governed by purely psychological considerations of a very abstruse nature.[7] Thus under more complex conditions a monopsony's demand-preference schedule depends upon much more complex calculation and cannot, in general, be represented as in Figure 2 by constant-pecuniary-surplus curves interpreted as demand-indifference curves. When the productivity of a product or service to a monopsony is not definitely known in advance, but can be anticipated only in terms of probabilities, definitive pecuniary-

[7] If a monopsony is motivated by purely psychological considerations, an average-utility curve may be postulated analogous to the average-productivity curve in Figure 2. In marginal-utility analysis of demand it is generally maintained that marginal utility decreases with initial increments in quantity as well as all subsequent increments. If this prevailing interpretation of the principle of diminishing utility is accepted, it follows that average utility also decreases with initial increments in quantity. Thus a monopsony's average-utility curve must be shown not as a ∩, but as a curve sloping downward to the right throughout its entire course. Cf. the average productivity curve in Figure 2.

On the other hand, if the average-utility analysis of monopsony is continued, constant-psychological-surplus curves may be postulated corresponding to the constant-pecuniary-surplus curves in Figure 2; and the constant-psychological-surplus curves are properly drawn in the rough form of ∩ as long as they refer to positive psychological surpluses. Subject to this condition each constant-psychological-surplus curve, because of its similarity to an inverted rectangular hyperbola, has an ascending left-hand branch, and each constant-psychological-surplus curve, because of its relationship with an average-utility curve, has a descending right-hand branch. Thus each constant-psychological-surplus curve is roughly in the form of a ∩ even though the given average-utility curve slopes downward to the right throughout its entire course. Constant-psychological-surplus curves may then be identified as levels of demand preference.

surplus curves cannot be logically postulated. Demand-indifference curves, derived from given probabilities of productivity, must also reflect a given buyer's caution or willingness to assume risks.[8] With conditioning influences of this nature there is no assurance that demand-indifference curves possess all the characteristics of constant-pecuniary-surplus curves.

On the other hand, it is submitted that typical demand-indifference curves always retain some of the general characteristics of constant-pecuniary-surplus curves exemplified in Figure 2. Thus, in the first place, typical demand-indifference curves are roughly in the form of ∩'s, reflecting the general influence of increasing and diminishing returns. Second, a typical family of demand indifference curves is a nested family of ∩ curves. Third, in a typical family of demand-indifference curves the lower members represent higher levels of demand preference; the upper members, lower levels of demand preference. Fourth, members of a typical family of demand-indifference curves approach one another more and more closely on the right. Fifth, in a typical family of demand-indifference curves each successive lower member has its maximum point farther to the right than the maximum point of the immediately preceding higher member.

Upon the basis of these simple typical characteristics of demand-indifference curves particular deductions may be made in particular analytical problems. The concept of a demand-preference schedule is primarily developed in this article for analysis of monopsony. This concept of demand, however, may also be applied to any individual competitive buyer. For the sake of another brief initial comparison let us assume that the demand-indifference curves d_1d_1', d_2d_2', etc., in Figure 2 represent the demand-preference schedule of a particular competitive buyer. Let us disregard the fact that d_1d_1', d_2d_2', etc., in Figure 2 are constant-pecuniary-surplus curves; but let us assume that d_1d_1', d_2d_2', etc., in Figure 2 retain the general characteristics of typical demand-indifference curves previously described. The curve DD' sloping downward to the right in Figure 2 is the locus of the maxi-

[8] Cf. n. 3, above.

mum points of d_1d_1', d_2d_2', etc. By methods similar to those previously employed in interpreting Figure 1, it can be easily shown that, subject to the immediate assumptions, the curve DD' in Figure 2 is the given buyer's competitive-individual-demand curve. By the same methods and subject to the same general assumptions it may be shown that any individual buyer's competitive-demand curve is the locus of the maximum points of the buyer's demand-indifference curves. Thus it may be clearly seen that competitive individual demand is always a particular phase of a more inclusive individual-demand attitude. In a particular fundamental sense a competitive buyer's demand is of the same general nature as a monopsony's demand. In either case the basic specifications of demand may be represented as in Figure 2 by a family of demand-indifference curves.

Now let us apply the technique of demand-indifference curves to a particular monopsony problem. Let us assume that the curves d_1d_1', d_2d_2', etc., in Figure 2 represents the demand-preference schedule of a monopsony under given conditions. Let us assume that the monopsony buys from a group of individual sellers whose total competitive supply is represented in Figure 2 by the curve SS'. The supply curve SS' in Figure 2 is tangent to a particular demand-indifference curve at point M. At point M in Figure 2 the monopsony reaches the highest level of demand preference compatible with the supply represented by SS'. Thus, under the given conditions, point M in Figure 2 represents MB, the equilibrium monopsony price, and OB, the equilibrium volume of monopsony purchases. By the same methods the equilibrium transaction of any monopsony can be determined if the monopsony is governed by a particular demand and supply situation of the type represented in Figure 2 by d_1d_1', d_2d_2', etc., and SS'.

As a result we have a new view of monopsony which supplements the customary exposition in terms of marginal productivity and marginal cost. In terms analogous with those represented in Figure 1, Figure 2 exemplifies a more general equilibrium relationship between demand and supply in a monopsony situation. When a monopsony buys from competitive sellers, the equilibrium market price is obviously the price of greatest demand

preference compatible with supply. Price *MB* in Figure 2 is a specific price determined by demand and supply in accordance with this principle. The interaction of demand and supply, exemplified in Figure 2, is of much greater general significance than equal marginal productivity and cost. In most instances marginal productivity and marginal cost are not the final considerations governing monopsony purchases. Marginal productivity is not, in general, the only element entering into monopsony demand. Monopsony demand is also governed by (1) the uncertainty of productivity from immediate purchases and (2) anticipations of future problems in supply, competition, and productivity. In conventional analysis of monopsony marginal productivity is equated with marginal cost, but the marginal cost of a product to a monopsony is merely a particular derivative of supply. In Figure 2 marginal productivity and cost are thrust into the background as partial considerations and fully developed schedules of demand and supply are shown as the determinants of monopsony price.

In the concluding portion of this paper let us consider the general theory of bargaining between monopoly and monopsony. Bargaining of this type is of increasing importance in the modern industrial world because particular economic groups are becoming more and more thoroughly organized—laborers and farmers especially. In analysis of any situation in which a monopoly negotiates prices with a monopsony, the combined use of supply-indifference curves and demand-indifference curves enables us to demonstrate particular conclusions which cannot be demonstrated in any other way. By the use of the indifference-curve technique Professor F. Y. Edgeworth showed long ago that the price at which monopoly sells to monopsony is indeterminate within particular limits.[9] An adaptation of Professor Edgeworth's original technique is presented in Figure 3. The supply-indifference curves s_0s_0', s_1s_1', s_2s_2', etc., in Figure 3 represent the supply-preference schedule of a particular monopoly. It is assumed that the monopoly is negotiating business with a particular monopsony. The

[9] Francis Y. Edgeworth, *Mathematical Psychics* (London, 1881) ("London School of Economics Reprints of Scarce Tracts," No. 10 [London, 1932], pp. 20–26).

demand-indifference curves $d_0d'_0$, $d_1d'_1$, $d_2d'_2$, etc., in Figure 3 represent the monopsony's demand-preference schedule. The principal difference between Professor Edgeworth's indifference curves and the corresponding curves shown in Figure 3 is that Professor Edgeworth's curves refer to total demand and supply prices, whereas in Figure 3 the curves $d_0d'_0$, $d_1d'_1$, $d_2d'_2$, etc., and $s_0s'_0$, $s_1s'_1$, $s_2s'_2$, etc., refer to prices per unit of product.[19] It is submitted that the adaptation of Professor Edgeworth's technique exemplified in

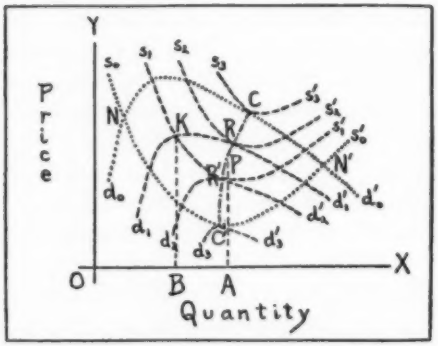

FIG. 3.—Monopoly-monopsony bargain

Figure 3 has at least two advantages: First, prices per unit, as represented by the supply- and demand-indifference curves in Figure 3, are of much greater general interest than total supply and demand prices. Second, supply-indifference curves and demand-indifference curves of the types exemplified in Figure 3 are easily contrasted because the former are ∪'s, the latter ∩'s.

In the family of supply-indifference curves in Figure 3 a particular curve $s_0s'_0$ marks the lowest prices the monopoly will consider in selling particular quantities of product to the monopsony. In the family of demand-indifference curves in Figure 3 a particular curve $d_0d'_0$ marks the highest prices the monopsony will consider in buying particular quantities of product from the monopoly. Under the conditions represented in Figure 3 by $d_0d'_0$ and

[19] See n. 4, above.

s_0s_0', it is obvious that no bargain can be consummated if the specifications of the bargain rise above d_0d_0' or fall below s_0s_0'. Thus for the actual transaction of business a limited area remains in Figure 3 between the curves d_0d_0' and s_0s_0'. This area in Figure 3 terminates on the left at the point of intersection N, and on the right at the point of intersection N'. If no such area exists, no bargain between the monopoly and the monopsony is possible under the given conditions. Let us assume, however, as specifically exemplified in Figure 3, that an area does exist within which bargains can be made.

In Professor Edgeworth's analysis the locus of points of tangency between an individual buyer's indifference curves and those of an opposing seller is designated a "contract curve." In accordance with this definition, CC' in Figure 3 is the contract curve determined by tangency between the monopsony demand-indifference curves d_0d_0', d_1d_1', d_2d_2', etc., and the monopoly supply-indifference curves s_0s_0', s_1s_1', s_2s_2', etc. It can be easily seen in Figure 3 that the contract curve CC' runs roughly through the midst of the area of possible transactions. Finally, it can be shown that any contemplated bargain between the two opposing parties has a tendency to shift to the contract curve CC' in Figure 3. For specific illustration let us assume that the monopoly and monopsony are considering the possible transaction marked in Figure 3 by point K, which lies within the area of possible bargaining but is not located on the contract curve. If the transaction marked by point K in Figure 3 is consummated, OB goods will be sold at price KB. Let us compare this transaction, however, with other possible transactions represented by particular points on the contract curve CC' in Figure 3. Point K in Figure 3 lies on a particular demand-indifference curve d_1d_1' and also on a particular supply-indifference curve s_1s_1'. On the contract curve CC' in Figure 3 the arc RR' lies between the demand-indifference curve d_1d_1' and the supply-indifference curve s_1s_1'. By reference to the two series of indifference curves in Figure 3 it can be easily seen that any transaction marked by a point such as P on the arc RR' is of greater advantage to both the monopoly and the mo-

nopsony than the transaction marked by point K. Therefore, if the two opposing parties are temporarily considering the transaction marked by point K in Figure 3, mutual advantages will tend to shift the specifications of the bargain to a point such as P on the contract curve CC'. In this manner it can be shown that any contemplated bargain off the contract curve has a tendency to shift to the contract curve. On the other hand, no point of final equilibrium on the contract curve can be demonstrated on the basis of the given information. Thus, in any situation of the type represented in Figure 3, the price at which monopoly sells to monopsony is considered an indeterminate price on the contract curve within the area of possible transactions.

This general conclusion is by no means a new discovery. It was advanced by Professor Edgeworth sixty years ago. In the interim other writers have approached the problem of monopoly versus monopsony from other angles.[11] More recent investigations of the problem, however, are limited by the assumption that quantity is already determined and that price alone is subject to negotiation, or by narrow assumptions of a closely similar nature. Professor Edgeworth did not consider certain dynamic aspects of bargaining to which subsequent writers have called attention.[12] On the other hand, Professor Edgeworth did consider the simultaneous negotiation of both quantity and price. In this respect his analysis is still supreme.

For present purposes it is sufficient to restate Professor Edgeworth's theory in a form adapted to current interests. Supply and demand have been regarded in this article as specific schedules of preference. In any situation of the type represented in Figure 3,

[11] See the extensive bibliography given on the initial page of Gerhard Tintner, "Note on the Problem of Bilateral Monopoly," *Journal of Political Economy*, XLVII (1939), 263–70. Particularly significant is the analytical discussion of monopoly vs. monopsony in A. L. Bowley, "Bilateral Monopoly," *Economic Journal*, XXXVIII (1928), 651 ff.; F. Zeuthen, *Problems of Monopoly and Economic Warfare* (London, 1930), chap. iv; and J. R. Hicks, "Annual Survey of Economic Theory: The Theory of Monopoly," *Econometrica*, III (1935), 16 ff.

[12] An excellent review of the non-Edgeworthian theory of monopoly vs. monopsony is contained in William H. Nicholls, *Imperfect Competition in Agricultural Industries* (Ames, Iowa, 1941), pp. 181–96.

supply and demand preference schedules do not determine an equilibrium price. On the other hand, a schedule of monopoly supply preference and a schedule of monopsony demand preference jointly result in a central path of negotiation graphically represented as in Figure 3 by a contract curve. In this manner an old idea, divorced from all hedonistic implications, is restated in terms of supply and demand concepts which have been specifically enlarged and renovated, and is developed as far as possible on a purely objective basis.

The same concepts of monopoly supply and monopsony demand have been shown to clarify the main issues of price determination (1) when monopoly sells to competitive buyers and (2) when monopsony buys from competitive sellers. Furthermore, fundamental similarities have been demonstrated (*a*) between the supply of monopoly and the supply of an individual competitive firm and (*b*) between the demand of monopsony and the demand of an individual competitive buyer. Therefore, supply and demand preference schedules are recommended as generally significant and useful in short-run theoretical analysis.

MONETARY EFFECTS OF WARTIME SOCIAL SECURITY TAXES

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I. INTRODUCTION

PROPOSALS for new or increased social security taxes[1] have recently been advanced on the ground, among others, that such taxes would constitute an effective brake on inflation. It is the purpose of this paper to investigate the validity of this claim.

Pigou's criterion for the existence of inflation is that "money income is expanding more than in proportion to income-earning activity."[2] Modern war, at least in the belligerent countries, and except in its early stages, is typically a time of maximum "income-earning activity."[3] Once the war effort is in full swing, there is no unemployment except for the unavoidable minimum incident to the transfer of resources from civilian to war production and similar frictional causes. Conceivably the tax load may be so heavy as to reduce employment below this maximum,[4] but the likelihood of such an eventuality seems so small as to justify its being ignored.

If employment of resources is at a maximum and the amount

[1] As the subject matter of this paper, the term "social security taxes" will denote *new* (or increased) federal taxes levied for the purpose of furnishing unemployment benefits and/or old age and survivors' annuities on a basis similar to that provided for in the federal Social Security Act of 1935 and the 1939 amendments thereto. At present (May, 1942) the federal unemployment insurance tax, amounting to 3 per cent of pay rolls is paid entirely by the employer. The latter may, however, deduct contributions to a state unemployment insurance fund up to 90 per cent of the federal tax. The federal old age insurance taxes consist of (*a*) a tax on employees and (*b*) a tax on employers, both at the same rate, now 1 per cent.

[2] A. C. Pigou, "Types of War Inflation," *Economic Journal*, LI (1941), 439.

[3] The maximum may, of course, be rising over time.

[4] For a discussion of this possibility see A. G. Hart, "Flexible Taxes To Combat Inflation," *American Economic Review*, XXXII (1942), 87.

of government expenditures is determined independently of revenue receipts, then a tax is anti-inflationary[5] to the extent that it transfers current money income from the public to the government. While all taxes will be anti-inflationary to some extent, their effectiveness in this respect will differ widely. Some, as, for example, a flat-rate withholding tax, might be substantially anti-inflationary, while others, as perhaps an estate tax, might be only negligibly so. Our task, then, is to find out whether or not social security taxes are substantially anti-inflationary.

As our analysis of the monetary effects of the tax will be limited to the period of the war, we shall confine ourselves to probable short-term developments.[6] The following assumptions will be made throughout:

1. Since the economy is operating at the practicable upper limit of its capacity, all industries and firms are producing under rising (and frequently sharply rising) marginal costs.[7]

2. Any new social security taxes will be levied partly on employers and partly on employees; the coverage will be the same as that of existing taxes.[8]

[5] By the "anti-inflationary tendency of a tax" is here meant the effectiveness of the tax in reducing the money income available to the public to an amount less than what it would have been in the absence of *any* tax (or compulsory savings scheme) and not merely its effectiveness in keeping that income from rising. Thus a tax which finances an expenditure which would not have been made in its absence is not anti-inflationary in our sense, even though it be collected entirely from current income. It is reasonable to assume, however, that in wartime expenditures will be made without relation to the amount collectible in taxes.

[6] This, of course, assumes a reasonably short war. "A fact that we cannot brush aside is the essentially short-run character of the economic problems of war" (Horst Mendershausen, *The Economics of War* [New York, 1941], p. 74). The opinionh as been expressed that even in peacetime long-run tax analysis can never be of great significance for economic policy (see Benjamin Higgins, "The Incidence of Sales Taxes," *Quarterly Journal of Economics*, LIV [1940], 665).

[7] On the reasons for declining *physical* productivity in time of war see Mendershausen, *op. cit.*, pp. 108–11. Mendershausen points out that the index of output per person in manufacturing industries in the United States dropped from 119 in 1916 to 110 in 1917 and 105 in 1918. See also Pigou, *op. cit.*, p. 441. The payment of overtime above a rather short working week also contributes to rising unit costs as output is increased.

[8] At the present time the unemployment tax does not apply to employers having fewer than eight persons in their employ or to wages received from agricultural labor; domestic service; services to federal, state, or local governments; services in the interest of nonprofit institutions; services within one's own family by children

3. In practice there is not much opportunity for consumer substitution of products of the noncovered industries for products of the covered industries.

4. Military goods are produced by covered industries, and there is a considerable degree of occupational mobility of labor between the covered industries producing for the civilian population and those producing for the armed forces.

5. There is relatively little mobility between covered and noncovered industries because of the great difference, in general, between the types of labor employed.[9]

Although in the long run the incidence and economic effects of a social security tax levied on employers are probably not distinguishable from those of a tax levied on employees, in the short term the point of original impact cannot be overlooked.[10] Accordingly, the two taxes, termed here "employers' pay-roll tax" and "employees' tax," respectively, will be treated separately. For reasons which will become clear later, a distinction will also be made between "civilian" industries and "war" industries, even though in practice most "industries" supplying the government cater also to civilian needs.

Finally, the effects of benefit disbursements will be disregarded. Old age benefit payments at this stage of the social insurance program are insignificant in relation to collections[11] and are likely to continue to be so during the war because of later retirements; and large unemployment benefits are excluded by substantially full employment.

To evaluate the monetary effects of a tax, it is first necessary, if possible, to establish its incidence. But where the tax accounts

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under twenty-one; fishing; and casual labor not in the course of the employer's trade or business. The old age and survivors' tax applies to all establishments, including those with eight employees or fewer. Otherwise the exemptions are the same as in the case of the unemployment tax.

[9] The effect of assumptions Nos. 3 and 5, which, as the reader will notice, are not unrealistic, is for most purposes the same as assuming universal coverage for the tax.

[10] Cf. Gerhard Colm, "Methods of Financing Unemployment Compensation," *Social Research*, II (1935), 154; also James K. Hall, "Incidence of Federal Social Security Payroll Taxes," *Quarterly Journal of Economics*, LIII (1938), 40, 44.

[11] Total receipts from the federal old age and survivors' tax to the end of fiscal 1941 were $2,536.2 million; total benefits payments were $99.5 million (*Treasury Department Bulletin*, December, 1941, p. 11).

for only a small portion of the total government income, neither its incidence nor its monetary effects will be independent of the government's fiscal and price-regulatory policy as a whole. Broadly speaking, this policy may take one of three forms: (1) very heavy taxation plus borrowing from current income, so as to preserve a reasonable stability of income and prices; (2) inflation; (3) price-fixing (and rationing). Or it may be a combination of two or of all three practices. For example, fairly heavy taxation may be combined with the borrowing of new money and a considerable degree of price-fixing.

While this country now appears definitely committed to a policy of almost universal price-fixing, it is generally recognized that such a policy will, by itself, not completely obviate the danger of price inflation. As long as money incomes continue to increase, we will be experiencing an income inflation which, in time, may exert an irresistible pressure on price ceilings. The mere fact, therefore, of the existence of far-reaching direct price control does not obviate the necessity of considering the effects of an inflationary policy on the incidence of the social security taxes. It will be convenient, however, to conduct the analysis by first considering the probable incidence of the taxes under a noninflationary policy and then admitting in turn the effects of inflation and price-fixing.

We turn first to the employers' pay-roll tax. After determining its incidence, as best we may, we shall consider its monetary effects. Then the employees' tax will be taken up separately.

II. EMPLOYERS' PAY-ROLL TAX: INCIDENCE UNDER NONINFLATIONARY POLICY[12]

A. CIVILIAN INDUSTRIES

The impact of the employers' pay-roll tax will, of course, be on the employer. Since the tax is proportional to wages, the labor-cost curve moves upward and, with it, marginal and average costs

[12] Since it is practically out of the question for governments to maintain *complete* stability of money income during wartime, the term "noninflationary policy" does not here denote a constant MV. The government is assumed not to engage knowingly in inflationary borrowing (and it is also assumed there is no "wage-induced"

as a whole. If prices cannot be raised to the consumer, the added cost must be offset by lower wages (or other factor rewards) or lower profits. Alternatively, or in combination with one or more of these possibilities, output must decline to the point where the tax is absorbed in lowered marginal costs. What shifting will occur, if any, and in what direction and degree, will depend on supply-and-demand conditions in both product and factor markets.[13] Under our present assumptions what are these conditions likely to be?

The supply of labor in general is likely to be highly elastic downward. For this there are a number of reasons. First, organized labor is exceptionally strong in wartime, which means that, over the greater part of the economy, wages are flexible in only one direction. Second, with industry relatively prosperous, even after taxes, it is not easy to induce labor to accept wage cuts. Third, the cost of living is likely to be rising, not because of monetary reasons (any large degree of inflation being excluded by present assumptions) but because of the higher physical unit costs associated with war conditions, already alluded to above. Fourth, lower wages *after* (*direct*) *taxes*, a virtual certainty under a non-inflationary policy, and the opportunity which many workers will have of selling their services to the war industries,[14] will also increase resistance to wage reductions.

Of course, labor's supply reaction to a reduction in money wages resulting from the tax would depend in part on the value placed by laborers on the prospective insurance benefits. In view of the relatively low income of labor, on the one hand, and of the

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inflation [see below, Sec. IV]), but the banks may create new money for private interests, and increases in velocity are not assumed to be offset. Hence, an increase in the general level of prices is possible.

[13] For a general discussion of the theory of incidence of social security taxes see Seymour E. Harris, *Economics of Social Security* (New York, 1941), chaps. xiii–xx. This is probably the most comprehensive and thoroughgoing treatment of the subject that has yet appeared. The writer is glad to acknowledge his indebtedness to Professor Harris' work, on which he has drawn freely in revising an earlier version of this paper.

[14] Where, as will be shown later, the pay-roll taxes will not subject wages to any pressure.

high rate at which distant utilities are generally discounted, on the other, it is probable that the present valuation of any insurance protection beyond that obtained through the sacrifice of a very small amount of money wages would, for most laborers, fall short of the valuation of the wage dollar. If the increase in taxes is not associated with an increase in benefits, the probable inequality between the two valuations would, of course, be still greater.

All in all, therefore, the (downward) elasticity of the labor supply in wartime is likely to be very high. This makes it reasonably certain that labor will not bear the burden of the employers' pay-roll tax in the form of reduced wages. Whether or not it will be forced to bear it in the form of reduced employment remains to be seen.

The supply of capital goods, unlike that of labor, will be very inelastic downward, as in any short-run period.[15] Owing to priorities, it will also be inelastic upward, which will make it difficult, if not impossible, to substitute capital for labor even in cases where the elasticity of substitution is high. Under these conditions, capital will be highly vulnerable to an attack on its rate of remuneration as a result of the tax. This does not necessarily mean a reduction in interest rates, however, for we are dealing with the short period, when the major element in the determination of the rate is the supply of, and demand for, liquid funds. Any part of the burden which will fall on "capital" will in actuality be borne by the owners of existing capital goods (including in this term land in use), i.e., for the most part entrepreneurs and landlords.[16]

[15] In fact, downward inelasticity of capital goods is a generally accepted criterion for the "short-run." "The 'short-run' is taken to be a period which is long enough to permit of any desired change of output technologically possible without altering the scale of plant, but which is not long enough to permit of any adjustment of scale of plant" (Jacob Viner, "Cost Curves and Supply Curves," *Zeitschrift für Nationalökonomie*, III [1932], 26). In our case an exception will be those capital goods which are readily adaptable to war-production purposes. (The reader will remember that we are dealing with capital goods in the *civilian* industries.)

[16] Since entrepreneurial ability may be regarded as a fixed capital investment, what has been said above applies also to owners of this type of "capital good."

With wages inflexible downward, employers may be expected to attempt to shift the tax elsewhere. According to the "classical" theory of incidence, employers in purely competitive industries would be forced to reduce output so as to bring their marginal costs back into line with the prices of their products. The result would be to raise product prices as well as to reduce costs, for industry supply curves, now shifted to the left, would intersect industry demand curves at a higher point. In industries where monopoly or monopolistic competition prevails, the order would in most cases probably be reversed, with the increase in price preceding and giving rise to a decline in the quantity demanded and hence in output.

Before considering whether price rises brought about by the efforts of entrepreneurs could actually be made to "stick," it is worth while to note that not all employers would attempt to shift the tax (or the whole tax) forward, even when confronted with the impossibility of shifting it backward. As far as purely competitive industries are concerned, "the required output reduction necessary for each firm . . . . is small, and in the absence of careful cost analysis any reduction is unlikely."[17] Probably more important for us, however, is the case of the monopolist or monopolistic competitor.[18] Such an entrepreneur may find it necessary or desirable to absorb all or part of the tax for any of several reasons. One is that the price of the product is more or less conventionally fixed or legally regulated. Another is the desire to avoid charges of wartime "profiteering." A third is what has been called the "limited range of the 'estimated revenue' curves plus unwillingness to take the risk of experiment."[19]

Where, as above, the employer finds it inadvisable or impossible even to *attempt* to shift the tax forward, he will obviously

[17] John F. Due, "Ad Valorem and Specific Taxes," *Quarterly Journal of Economics*, LIV (1940), 685. The passage quoted relates to the incidence of a sales tax but applies equally well here.

[18] More important because pure competition would be exceptional among covered industries in peacetime, and even more exceptional during wartime, when *effective* free entry into many industries is greatly restricted.

[19] B. H. Higgins, "A Note on Methodology," *Quarterly Journal of Economics*, LIV (1940), 668.

bear the entire burden himself, since, as already pointed out, wage cuts will be practically out of the question. Unless the tax is very light, however, it may safely be assumed that the great majority of employers will be impelled to make such an attempt.[20] To what extent are they likely to succeed?

A shift of any part of the tax to the consuming public in the form of higher prices will require an increase in the community's money income.[21] Such an increase may come about through the entrepreneur, who may borrow at the bank or activate idle deposits to pay the tax in the expectation of recouping himself by charging higher prices; or it may come about through the increased turnover of money in the hands of consumers.

Grounds for believing that a rise in the total flow of money actually would take place in response to curtailed supplies or initial (i.e., attempted) price advances lie, first, in the probability that saving is a function of real income and, second, in the tenacity with which people presumably attempt to maintain accustomed living standards.[22] Some dishoarding of accumulated cash balances and some decline of individual savings may therefore be expected.[23] In time of war the latter has about the same effect

[20] It has been estimated that "in industries subject to the [social security] tax, profits vary from 10 to 20 per cent of the total payroll in flourishing years" (Gerhard Colm and Fritz Lehmann, *Economic Consequences of Recent American Tax Policy* [New York, 1938], p. 38). It will be seen from this that a tax of 3 or even 2 per cent would cut deeply into profits.

[21] It is sometimes implied that a general rise of prices of civilian goods may come about even in the absence of an increase in money income because of the diversion of resources to war industries and the consequent curtailment of supply of civilian goods (see "Bank Deposits and National Income," *The Banker* [London], LXI [1942], 92). This is incorrect. Increased output of war goods in the absence of new money income can only be accomplished by a transfer of existing income from civilians to the government. This transfer leaves the former a diminished supply of purchasing-power to apply against the diminished quantity of civilian goods available (cf. Pigou, *op. cit.*, p. 441).

[22] The two are *not*, as may appear at first glance, the same. The second point tells us that during the period of adjustment to a lower real income a person will save even less than he will after he is accustomed to it.

[23] Harris (*op. cit.*, p. 335 n.) states: "One may infer from the larger decline of savings than consumption in the years 1929–32 that a reduction of income (or, what is similar, a general rise of prices) is likely to result in a *relative* rise of consumption at the expense of savings."

in increasing money income as the former, the reason being that private investment is highly restricted and that practically the only outlets for savings (individual or corporate) are either some form of government debt or increased cash balances. Any reduction in the volume of savings therefore reduces the amount which the government previously could, but now no longer can, spend without inflationary effects.[24]

How important are dishoarding and savings reductions likely to be under our present assumptions? It would seem at first sight that under the extremely heavy taxes called for by a noninflationary fiscal policy in time of war the volume of savings and of cash balances would be too small to permit of any great reduction. It is unquestionably true that the volume of savings will vary in inverse direction to the weight of the tax system. But two facts must be borne in mind. First, a noninflationary fiscal policy would imply that the bulk of the taxes were paid at the expense of consumption rather than of savings or balances. Second, the volume of uninvested savings[25] would be partly maintained by the unavailability of durable consumers' goods. Furthermore, the fact that, of the goods being produced, a much greater proportion than normally would be "necessities" would increase the probability of a drain on current savings or cash balances to meet widespread price increases.[26] For these reasons it may be stated with confidence that at least some part of the employers' pay-roll tax would be passed on to the consumer.[27]

[24] The increase in incomes will be greater than the reduction in savings; how much greater will depend on the size of the "multiplier."

[25] Or, what is the same thing for our purposes, savings invested in war bonds.

[26] This probability would be still further increased because the possibility of substitution of products of the untaxed industries for products of the taxed industries would be very limited in scope. "The extent to which the unprocessed products of agriculture may be substituted for processed or manufactured goods has a definite and narrow limit" (Hall, *op. cit.*, p. 46).

[27] How large this part would be is hard to say. Perhaps some light is thrown on the matter by a recent estimate of the effect on saving of an income tax. It has been estimated that if a proportional income tax totalling 5 per cent of aggregate income were superimposed on the income-tax schedule already in effect in 1935–36, the over-all reduction of saving would amount to approximately 30 per cent of the tax (see Abram Bergson, "The Incidence of an Income Tax on Saving," *Quarterly*

For the most part, however, consumers will meet initial price increases, not by an increase in aggregate outlay on consumption goods, but by reducing consumption. To the extent that this happens, the money income of the community will not be increased,[28] and it will be impossible for entrepreneurs as a whole to maintain their initial price increases. This means that they will be able to shift only a minor portion of the tax to the consumer.

As far as labor is concerned, any workers displaced because of the tax would soon find employment in the war industries.[29] This, taken together with the fact that wages are rigid downward, means that on the whole labor will bear but a very small part of the burden of the tax.

This leaves the greater part of the tax to be borne by the employer himself.[30] As we have seen, most employers will find it necessary to reduce their output. Assuming that this reduction proceeds to the point where marginal costs inclusive of the tax are no greater than pre-tax marginal costs, the incidence of the tax will take the form of reduced or negative profits corresponding to the smaller output. In view of the steep slope of the marginal cost curve under war conditions, the curtailment required to bring about the necessary cost reductions should be relatively small.[31]

Journal of Economics, LVI [1942], 340). This estimate is explicitly based on the assumption that the behavior of a group of individuals whose income is altered may be predicted from the behavior of individuals at different income levels, i.e., from budget data.

[28] Provided, of course, that the taxpayer, i.e., the employer, refrains from dishoarding or reducing his savings. As will be shown presently, he does so only to a small extent, and, furthermore, there are other reasons why payment of the tax out of profits is associated with an increase in money incomes.

[29] "In war-time it is proper to assume that increased wage rates will not be allowed to evoke unemployment" (Pigou, *op. cit.*, p. 441).

[30] An exception would be the case of the employer who is able to convert to war work. In most cases any curtailment attributable to the tax will be too small by *itself* to justify such a shift. This may not be true, however, in industries using a very large proportion of labor to capital goods.

[31] Cf. Joan Robinson, *Economics of Imperfect Competition* (London, 1938), chap. v, esp. pp. 77 and 82. Professor Douglas says that an increase in wages (which, with

B. WAR INDUSTRIES

All but a very small part of the military equipment and supplies purchased by the government is procured on the basis of negotiated contracts.[32] There are various types of contracts, but in every case the basis on which negotiations are conducted is the cost to the supplier. It is the policy of all government procurement agencies to admit social security taxes as costs which may enter into the price of the article purchased.[33] Inasmuch as there is no reason for supposing that this policy would be reversed in the event of imposition of additional social security taxes, this means that the employers' pay-roll tax in the war industries would be shifted in its entirety to the government.[34]

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regard to the point under discussion, is the same thing as an employers' pay-roll tax) would cause less unemployment in industries operating under imperfect competition than it would under conditions of perfect competition. "Since the marginal revenue curve is negatively inclined, an upward shifting of the cost curve would cause the new intersection to differ from the former by less than would be the case were the marginal revenue curve and the average revenue curve to be identical and horizontal to the base as they would be under . . . . perfect competition" (Paul Douglas, "Wage Theory and Wage Policy," *International Labour Review*, XLI [1939], 352). Douglas apparently overlooks the fact that, as "perfect competitors" curtailed output, the price of their product (i.e., their individual average revenue curves) would rise along the *industry* demand curve, which is negatively inclined. Hence the reduction of output will be smaller than that indicated by the original position of the average revenue curves of the individual firms and need not necessarily be larger than under imperfect competition.

[32] A directive issued by the chairman of the War Production Board on March 3, 1942, required all contracts, except those for which specific authorization for competitive bidding is given, to be placed by negotiation (*New York Times*, March 4, 1942). Even before this order, the great bulk of total war purchases was consummated in this manner (see Mark S. Massel, "Types and Operations of Defense Contracts," *Journal of Accountancy*, LXXIII [1942], 45).

[33] The legal basis for this policy is to be found in *Decisions of the Comptroller General* (Washington, 1941), XX, 499, where it is ruled that state taxes for unemployment compensation are reimbursable to the contractor; see also *Treasury Decision No. 5000*, sec. 26.9 (*c*)(5)(*E*).

[34] This conclusion need not rest on precedent alone. The insatiable demand for war goods, plus the fact that direct outlays must be covered by the price received if production is to be maintained, would make it necessary for the government to allow the tax as a reimbursable cost in every case except where an abnormal profit was being earned. And, of course, contracts are always negotiated on the assumption that the profit margin will be "normal."

III. MONETARY IMPLICATIONS

Remembering that we are still dealing with a wartime employers' pay-roll tax imposed as part of a "noninflationary" fiscal program, it is convenient at this point to summarize our findings regarding the incidence of the tax and to draw the necessary monetary inferences.

Without question, the most significant finding was that which related to the war industries. If expenditures on war goods are going to amount to one-half the national income and if the government, as consumer, is itself to pay all the tax imposed on employers in these industries, then at least[35] half of the total employers' pay-roll tax will be borne by the government in this form alone. In the civilian industries most of the tax will be paid by entrepreneurs in the form of lowered profits. Of the remainder, the greater part will be paid by consumers in the form of higher prices, and the rest will be offset by an increase in marginal productivity as output is curtailed. Labor as such will escape the incidence of the tax almost entirely.

We are now in a position to appraise the value of the employers' pay-roll tax as an anti-inflationary device.

In the war industries, which would probably account for more than half of the tax, the government would add the amount of the tax to the income stream in the form of increased outlays and simultaneously would abstract an equal amount by collection of the tax. There will have occurred no net transfer of money income from the public to the government, and hence the anti-inflationary value of this part of the tax will be nil.

The part of the tax that will be shifted to the consumer in the form of higher prices will likewise have no anti-inflationary value whatever. This portion of the tax, as explained earlier, will be paid out of an increase of money income occurring through dishoardings and lowered savings.

If we turn our attention to the portion of the tax which is paid

[35] As assumed above, practically all the government's war needs will be filled by *covered* industries. Since these industries account for considerably less than the total national income, the government, in spending a certain fraction of the national income, will take more than that fraction of the output of the covered industries.

at the expense of profits, we find that there is an anti-inflationary element present but that it is very small. The chief reason for this, of course, is that business profits are already taxed so heavily (and are certain to be taxed still more heavily in the near future) that most of the social security tax receipts from this source would merely be taking the place of other taxes which would have been collected in its absence.[36]

Even the portion of the tax paid out of business profits that otherwise would *not* have been taken by the government is not by any means entirely anti-inflationary. If it reduces undistributed profits, it thereby reduces business savings and, as pointed out above, any reduction of savings in wartime leads to an increase in incomes. If it comes out of dividends, it will be met partly (perhaps mostly) at the expense of personal savings rather than consumption[37] and will also reduce personal income tax collections.

The conclusion is inescapable that, under our present assumptions, the anti-inflationary value of the employers' pay-roll tax is almost negligible.

IV. EMPLOYERS' PAY-ROLL TAX: THE INFLATIONARY CASE

In the war industries the incidence of the tax under inflation will rest on the government, exactly as in the case previously considered. What follows in this section, therefore, refers to the civilian industries.

Pigou distinguishes between two types of wartime inflation: "deficit induced" and "wage induced." Deficit-induced inflation arises in conditions of full employment through the creation of new money by or for the government. Wage-induced inflation

[36] In 1941, 110 large manufacturing companies paid out in income and excess profits taxes 54 per cent of net income before taxes (see National City Bank [New York], *Monthly Letter*, March, 1942, p. 29). With higher corporate taxes due to be enacted shortly, the percentage of corporate profits taken by the government will rise. It has been estimated that if the rates recently proposed by the Treasury go into effect, they will absorb approximately 65 per cent of the aggregate corporate operating profits indicated for 1942. If so, every employer's pay-roll tax dollar paid out of profits will represent only 35 cents in new revenue to the government.

[37] Dividend receivers as a group receive relatively high incomes and hence may be presumed to have a low propensity to consume.

comes about through increases of pay obtained "to offset rising prices when these are due to diminished productivity." This, Pigou points out, "is quite a different thing from the diminished *production* of civilian goods which results from resources being diverted away from the war uses. So long as no new money is created, that does not make the price of civilian goods rise." Inasmuch as the higher wages will in wartime not produce unemployment, they must result in the creation of new money. This will lead to higher prices, possibly further demands for wage increases, etc.[38]

No attempt will be made to estimate how much of the inflation we have had, or may have, in this country, is deficit induced and how much, if any, is wage induced. Both types of inflation can, of course, take place at the same time. It is probably true, however, that wartime inflation is to an overwhelming degree the creature of governmental deficits. The difference is of some importance for our purposes because the incidence of the employers' pay-roll tax will be found to differ with the type of inflation.

If it is assumed that, in the case of deficit-induced inflation, wages lag behind prices—a reasonable assumption—entrepreneurs will absorb a greater part of the tax than they would in the previously described case of a "noninflationary" fiscal policy. To say that wages in general lag behind prices is also to say that they lag (or lag more than ordinarily) behind the marginal value productivity of labor. That being the case, any increase in wages or any pay-roll tax which still leaves the marginal cost of labor below the marginal value productivity of labor will not cause any curtailment of output or necessitate any increase in price. We have already seen that in such circumstances the entrepreneur will absorb the entire tax himself instead of passing some of it on to the consumer. The effect of deficit-induced inflation, then, compared

[38] Pigou, *op. cit.*, pp. 440–41. The writer is at a loss to understand why Pigou limited wage-induced inflation to that caused by wage demands intended to offset price rises due to lower productivity. Would not the same effects proceed (still assuming an otherwise stable money income) from successful demands for wage increases arising from (*a*) a desire on the part of labor to resist a reduction in its standard of living brought about by heavy taxation or from (*b*) an attempt to use labor's strong wartime position to increase its share of the national income? The writer will use the term "wage induced inflation" in the broader sense suggested here.

with "noninflation," is to shift part of the burden of the employers' pay-roll tax from the consumer to the employer. The monetary result will be to increase slightly, as compared with the former case, the anti-inflationary effects of the tax.[39]

Where the inflation is wage induced, wages will clearly not lag behind prices. However, apart from exceptional cases, they will not "lead" prices either.[40] Entrepreneurs will raise prices simultaneously with raising wages. If they did not, and permitted costs to outrun prices, they could not stay in business. In wage-induced inflation, in other words, prices and wages will generally advance *pari passu*.[41] This being so, there appears to be no good reason for modifying the conclusions reached in the "noninflationary" case. The incidence and monetary effects of the tax should be substantially the same under wage-induced inflation as under "noninflation."[42]

In fact, practically the same statement can be made with respect to the inflationary case as a whole. In either type of inflation the incidence of the tax on the war industries will be the same as in the "noninflationary" case. The tax on the civilian industries will have a slightly greater anti-inflationary effect under deficit-induced inflation than under "noninflation." By and large, however, the monetary effects of the tax will not be markedly different because of the existence of inflation.

[39] It was pointed out, when dealing with a "noninflationary" fiscal policy, that any forward shifting of the tax would have *no* anti-inflationary value. The same is true even when there already exists a certain amount of inflation. Shifting of part of the tax to the consumer under inflation implies an increase in money incomes *over and above* the increase already being created by the government. On the other hand, at least a small part of the incidence on entrepreneurs will be met out of current income. As far as labor is concerned, if wages lag behind prices, the former will be even more inflexible downward than in the "noninflationary" case.

[40] By "prices" here is meant *prices in the industries in which wages are increased.*

[41] Some, perhaps the "first," wage increases can be obtained at the expense of profits, but these would be wage increases merely and not causes of wage-induced *inflation.* In wage-induced inflation wages "push" prices ahead of them.

[42] While it is true that, given the existence of wage-induced inflation, the employers' pay-roll tax would have very little anti-inflationary value, it is also true that, as far as the tax reduced profits, it would discourage demands for wage increases and thereby tend to *prevent* wage-induced inflation.

V. EMPLOYERS' PAY-ROLL TAX: EFFECTS OF PRICE-FIXING AND RATIONING

The rule which generally must guide governmental fixing of prices in wartime is to set the price at that level which will bring forth the desired supply. It is not necessary to fix it higher, and it is impossible to fix it lower and still get the needed quantities.[43] It is also safe to say that in the great majority of cases the price fixed will be below the demand price for the corresponding quantity; otherwise there would be no occasion for price-fixing.

Now, in the case of any one product, if it takes a given price OP to bring forth a supply OM, any uncompensated increase in costs affecting all producers will cause the supply to fall below OM.[44] Unless, therefore, the authorities are willing to reduce the supply of the rationed article[45] in question to the public and are willing to do so because of the imposition of the tax, they must raise the price of the article by the full amount of the tax. Where, as is actually now the case, prices are fixed for practically all products of the covered industries, this would entail a very widespread (though limited) rise in prices.

The effect of such a price rise on money incomes will depend on how effective the price-fixing and rationing system actually is. If it is being rigorously enforced, the price rise will increase disposable incomes by the same amount that the tax reduces them, which means that the latter will have no anti-inflationary value. The reason is simple. Price-fixing and rationing restrain inflation by immobilizing a certain amount of money income which is then channeled off into cash hoards or government bonds. If the government permits prices to rise by the amount of the tax, consumers will still take the same amount as before (because demand prices exceed fixed prices) and thus disburse, in the aggregate, an amount exceeding their previous expenditures roughly

[43] See H. Stein, *Government Price Policy during the World War* (Williamstown, Mass., 1939), pp. 90–92.

[44] Of course, only output as a whole would be affected, not necessarily the output of each and every firm turning out the product in question.

[45] Since price-fixing involves either official or unofficial rationing, reducing the supply would mean reducing rations.

equal to the government's receipts from the tax. This excess expenditure will come either from cash hoards or from money that would otherwise have gone into government bonds, not from consumption.

In such circumstances the tax, while having no direct anti-inflationary effect, would still be of value in combating inflation because, by reducing the monetary pressure on price ceilings, it would be lessening the chance of possible future inflation which might arise from a breakdown of the price-fixing system.

Suppose now that the price-fixing system is only laxly enforced and that black markets are able to flourish or else that existing stocks are so large that only a few goods have to be rationed. In that event the increase in prices permitted by the authorities will not be passed on in its entirety to the consumer. Part of it will be borne by the entrepreneur just as it was in the free market inflationary case (Sec. IV), and for the same reasons; but the incidence of the tax on profits will be smaller than in that situation because in the case of goods on which price ceilings *are* enforced (and which are in short supply) the entire increase will be paid by the consumer.

It has been assumed up to this point that the authorities will permit the prices of products of the covered industries to be increased by the amount of the tax. But suppose they refuse to permit the ceilings to be "punctured." Then entrepreneurs, unable to shift the tax either forward or backward, will have to pay the whole of it out of their own profits (except to the extent that, by curtailing output, they succeed in reducing unit costs).

It was seen in Section III that under free-market conditions the consumption-reducing, and hence anti-inflationary, value of that portion of the tax which is paid at the expense of profits is very small. Under a system of price ceilings (i.e., practically universal price ceilings as assumed above) it would be even smaller. In fact, if legal prices are strictly enforced, the tax will have practically no actual (though, as explained above, it will have some preventive) anti-inflationary value. For, in that event, dividend-receivers, like other income-receivers, will have a certain amount of immobilized income on their hands which they would prefer

to spend but are forced to save. Hence any reduction in dividends caused by the tax, unless it is very large, is likely to cause a corresponding reduction in savings and to leave consumption altogether unaffected.[46] Only if price ceilings are being widely ignored, or if all kinds of goods including luxuries and semiluxuries such as travel, automobiles, etc., are in abundance so that there is no real hindrance to consumption expenditure, may the tax be instrumental in causing dividend-receivers to cut down slightly on their purchases of consumption goods.

VI. THE EMPLOYEES' TAX

The employees' tax, to the extent that it can be shifted at all, can in the first instance be shifted only to the employer. When this happens, the employees' tax becomes, for all intents and purpurposes, an employers' tax, and the analysis of its monetary effects will follow the lines already indicated for the latter tax. For this reason it is possible to deal with the employees' tax much more briefly than we could with the employers' pay-roll tax. All we need concern ourselves with in this section is whether or not labor will be able to shift the tax to employers. For a number of reasons the possibility of such a shift seems very doubtful.

Allusion has already been made to the importance of the impact effect in the short run. In the case of the employers' pay-roll tax labor is not required to exercise any initiative. Employers may want to avoid a contest with a strongly entrenched labor movement and may not even attempt to shift the tax backward. Where they do, labor has but to "stand pat," i.e., to defend existing wage scales. In the case of the employees' tax, on the other hand, nominal money wages remain exactly what they were. If labor wishes to shift the tax, it must demand an *increase* in wages and must be prepared to back up the demand, if necessary, by a resort to the usual methods of industrial warfare. Inasmuch as employers do not stand to gain anything from the employees' tax,

[46] It has already been pointed out above (p. 893) that, even under free-market conditions, dividend-receivers, because of their assumed low propensity to consume, are likely to meet the greater part of any reduction in their income caused by the tax out of savings.

such a demand is sure to meet with resistance, and knowledge of the fact that such resistance would be forthcoming will in itself tend to discourage the attempt. Nor could labor leaders in these circumstances count on the same support from public opinion or even from the wage-earners as they could expect were they merely defending the status quo.[47]

This is especially true during wartime, when the public is highly conscious of the "wage-price spiral," when strikes and other militant acts interfering with production are frowned upon, and when the patriotism of the workers themselves is an important factor to be reckoned with. Furthermore, while labor can ordinarily be depended upon to resist even the smallest cut in money wages, it will be reluctant to force the issue over a wage rise of as small a magnitude as that of a probable employees' social security tax of, say, 2 or 3 per cent. Finally, labor will be at a disadvantage in attempting to shift its share of the social security taxes to the employers when these are already bearing (or apparently bearing) their own share. For these several reasons it is highly improbable that labor will succeed in shifting the tax.[48]

[47] It may be said that labor's demand for increased wages need not ostensibly be associated with the imposition of the tax—that some other excuse can be found for the rise in pay. However, it must be assumed that, owing to labor's strong position in wartime, every good excuse for improvement will already have been exploited.

[48] It may be argued that classes of wage-earners which have suffered an extreme decline in living standards as a result of the war may try to recoup themselves for the tax at the expense of their employers in spite of the obstacles mentioned above. It is to be noted, however, that unorganized wage-earners will be practically helpless in this respect. The only way they could shift any *part* of the tax would be individually to withdraw part of their labor (along positively inclined supply curves), and the only way they could shift the entire tax would be to shift the supply curve of the group as a whole to the left, which, in practice, would require that some individuals withdraw their labor entirely. But, under the assumption of a very low standard of living, neither type of withdrawal is likely to take place; rather the individual labor supply curves are very likely to be negatively inclined at the point in question.

Organized wage-earners, on the other hand, may, as a whole, be depended upon at least to maintain their standard of living during the war *relative to other groups*. And, inasmuch as "standard of living" is largely a relative matter, this means that the standard of organized wage-earners will seldom fall so low as to constitute a compelling motive for shifting the tax.

Inasmuch as wage-earners as a whole are a relatively low-income group with a high propensity to consume, the indicated incidence implies that the employees' tax is preponderantly anti-inflationary.

VII. CONCLUSION

Under free-market conditions a new wartime social security tax payable by wage-earners would be an effective device for reducing disposable income in the hands of the public and so would be distinctly anti-inflationary. Under a system of nearly universal price-fixing such as now prevails in this country, the income-reducing effects of the employees' tax would vary inversely with the effectiveness of enforcement of the price ceilings. If price ceilings and rations are strictly enforced so that the workers are forced to save an appreciable part of their income, the loss of income caused by the tax is likely to be offset by a reduction of savings rather than of consumption. The net result will be that disposable incomes will be reduced very little. The converse is also true. Even, however, where the employees' tax does not actually reduce disposable incomes, it is still of value in fighting inflation because, by reducing cash hoards (or quick claims on cash) in the hands of a low-income group, it reduces the monetary pressure on price ceilings and thus has a prophylactic anti-inflationary effect.

As to the employers' portion of a wartime social security tax, it has been seen that under free-market conditions it would have very little anti-inflationary value. Under a system of controlled prices this value, actual or potential, is probably negligible.[49]

[49] The above analysis takes no account of the possibility of governmental wage-fixing as decreed in the President's wage-stabilization order of October 3, 1942, issued shortly before this article went to press. Consideration of this factor (assuming it to be coupled with price-fixing) will reveal, however, that it does not appreciably affect the conclusions reached above with regard to either the employers' or the employees' tax.

MALTHUS AND KEYNES

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TWO very interesting articles have been published in recent years which point out the remarkable extent to which much of Marx's thinking has tended "to foreshadow the modern theory of effective demand."[1] The writers have placed particular emphasis upon the degree to which Marx has anticipated the general theory of J. M. Keynes. The thesis of this paper is that Malthus deserves a much more prominent position than Marx as a forerunner of Keynes.

Part I reviews the points of similarity which exist between Malthus' general theory and that of Keynes. Part II sets forth some evidence upon the question of whether Malthus exerted any influence on Keynes, and Part III offers some general conclusions.

I

In beginning a consideration of the bases on which the theories of Malthus and Keynes may be compared, it is pertinent to observe that the efforts of both men were stimulated by the existence of widespread involuntary unemployment of labor and capital. Writing in the post–Napoleonic wars period, during which time industrial depression in Britain caused serious unemployment of labor and capital,[2] Malthus set out to explain why unemployment could occur, as well as to suggest steps which might be taken to eliminate it. Although he made a blanket criticism of the abstract, deductive method of analysis which had been developed by Ricardo and Say,[3] he was especially incensed by the unreality of their argument that general market gluts, and

[1] S. S. Alexander, "Mr. Keynes and Mr. Marx," *Review of Economic Studies*, VII (1939), 123–25, and Joan Robinson, "Marx on Unemployment," *Economic Journal*, LI (1941), 234–48.

[2] James Bonar, *Malthus and His Work* (London, 1885), pp. 284 and 289–90.

[3] T. R. Malthus, *Principles of Political Economy Considered with a View to Their Practical Application* (London, 1820), Introd., esp. pp. 20–24.

hence involuntary unemployment of labor and capital, were inconceivable because goods were the market for goods.[4]

It is manifest that Keynes's *General Theory* is a product of the worst period of involuntary unemployment of labor and capital the world has ever known. Like Malthus, Keynes deplored the general impracticability of classical theory because of its fanciful postulates.[5] Furthermore, he centered his fire on the classical school's contention that involuntary unemployment of labor and capital is impossible.[6] It seems clear that Keynes's main purpose in writing his *General Theory* was to expose the error of the classical position and to explain why involuntary unemployment can and often does exist, as well as to suggest possible measures for preventing its occurrence.

The general structures of Malthus' *Principles* and Keynes's *General Theory* provide interesting points of similarity. As Professor Hollander has remarked, Malthus' *Principles* is not a systematic treatise on economics but rather "a group of associated chapters dealing critically with certain economic principles which doctrinal controversy and current events had brought to the fore."[7] In many respects the same words can be

[4] *Ibid.*, pp. 8–9 and chap. vii, sec. iii. Ricardo and Say contended that money is merely a lubricant in the exchange process in which fundamentally goods trade for goods. Because human wants are insatiable, they argued, and inasmuch as everything saved becomes invested, there could never occur a general market glut because one half of the goods in the market provide the market for the other half. They admitted that temporary gluts for particular commodities might occur because of entrepreneurial errors of judgment in interpreting market conditions, but such gluts would be quickly ended by market adjustments. For a statement of this argument, cf. J. B. Say, *Treatise on Political Economy* (Philadelphia, 1827), pp. 76–83, 299, and 304–5; *Letters to Thomas Robert Malthus on Political Economy and Stagnation of Commerce by Jean Baptiste Say* (London, 1936), pp. 34–36. Also cf. David Ricardo, *Principles of Political Economy and Taxation* (London, 1817), pp. 398–412; James Bonar (ed.), *Letters of David Ricardo to Thomas Robert Malthus, 1810–1823* (Oxford, 1887), pp. 43, 45, 54, 101, 169–70, and 174; *David Ricardo's Notes on Malthus' Principles of Political Economy* (Baltimore, 1928), pp. 160 ff.

[5] J. M. Keynes, *The General Theory of Employment, Interest and Money* (New York, 1936), chaps. i and ii. By "classical economists" Keynes means Ricardo and his "followers," including J. S. Mill, Marshall, Edgeworth, and Pigou.

[6] *Ibid.*, chap. ii.

[7] *David Ricardo's Notes on Malthus* . . . . , Hollander's Introd., p. xxi.

used to describe Keynes's *General Theory*. More specifically, Malthus' Introduction and Keynes's chapters i and ii launch their respective author's assault upon the bastion of classical theory. Once the veil of agricultural illustrations has been lifted, Malthus' underlying theory of the effect of savings, investment, effective demand, and money upon the progress of wealth and the level of income and employment of labor and capital unfolds itself with a remarkably Keynesian flavor. The concluding section of Malthus' *Principles*, with its emphasis upon unproductive consumption and a public works program, is impressively similar in content and tone to Keynes's final chapter.

Another general basis for comparing Malthus and Keynes is the emphasis both have placed upon the dynamic aspects of economic phenomena. Malthus considered it the task of an economist "to trace distinctly the operations of that circle of causes and effects in political economy which are acting and re-acting on each other, so as to foresee their results, and lay down general rules accordingly."[8] He fully realized the great significance for economic analysis of a clear-cut distinction between short- and long-run effects.[9] We are all familiar with the long-run implications of classical theory. Malthus, although he recognized the usefulness of long-run equilibrium analysis, stressed the short-run aspects of economics because he felt that such an approach rendered economic theory much more practical for the purpose of aiding public policy-makers in their decisions.[10] Evidence of this is the importance he attached to "effective demand."[11] He observed that

[8] *Principles*, p. 16.

[9] J. M. Keynes, *Essays in Biography* (New York, 1933), pp. 139–40, letter of Malthus to Ricardo, January 26, 1817. In his *Essays* Keynes has quoted from several unpublished letters of Malthus to Ricardo, which had been discovered by Mr. Piero Sraffa (cf. p. 138). He has extracted the parts of Malthus' side of the correspondence which "show Malthus' complete comprehension of the effects of excessive saving on output *via* its effects on profits" (p. 141).

[10] *Ibid.*, p. 139; also Malthus, *Principles*, Introd. and pp. 521–22.

[11] Cf. *infra*, pp. 906–8 and 909–11. It is admitted that Malthus was not alone in his time in emphasizing inadequate "effective demand" and its associated ideas as the important cause of unemployment. In *Nouveaux principes*, Sismondi had some of the same ideas.

in the short run price results from the interaction of supply and demand in a competitive market. More concerned with market rather than natural price, he was inclined to dismiss cost of production somewhat lightly.[12] In his analysis of profits, Malthus again drew a distinction between the short and long run. He agreed that Ricardo was correct in his belief that in the long run rising food costs would cause a general wage increase which would gradually eliminate profits.[13] Such a profit theory was unsatisfactory however, because it failed to explain the much more significant short-period fluctuations in profits.[14] He viewed profit as the margin between the selling price of a good and its cost of production.[15] Thus, when "effective demand" outran supply, price would rise and the profit margin would increase.[16] The reverse, of course, would hold when supply outran demand. Viewed otherwise, if capital should be accumulated in too great abundance compared with the population, profits would fall; and if capital should be scarce in relation to population, profits would be high.[17]

It is commonly recognized that one of the outstanding characteristics of Keynes's *General Theory* is the significant place it gives to the dynamic forces which act and react upon economic life. As Keynes states in his Preface, the book is "primarily a study of the forces which determine changes in the scale of output and employment as a whole."[18] Abandoning the traditional belief that the influence of money is something "separate from the general theory of supply and demand," he has utilized money as a "link between the present and the future" in order to analyze "the economic behaviour of the present under the influence of changing ideas about the future."[19] His emphasis is on the theory

[12] *Principles*, pp. 76–78.

[13] *Ibid.*, pp. 308–9.

[14] *Ibid.*

[15] *Ibid.*, pp. 334–35.

[16] *Ibid.*

[17] *Ibid.*, pp. 306–7, 317, and 325–30.

[18] *General Theory*, p. vii.

[19] *Ibid.*, pp. vii and 293. Malthus also felt that it was wrong to assume that money was something separate and distinct from the general theory of supply and demand (cf. *infra*, p. 913).

of "shifting equilibrium" rather than on that of "stationary equilibrium."[20]

A careful reading of Malthus' *Principles* discloses that he has assumed that the economic reactions of men are largely governed by habit or that there are certain psychological tendencies which regulate the economic activities of human beings. He spoke, for example, of "habits of saving" and "consumption habits"[21] and also conceived of a "passion for consumption" and a "passion for accumulation."[22] He observed that

> while it is quite certain that an adequate passion for consumption may fully keep up the proper proportion between supply and demand, whatever may be the powers of production, it appears to be quite as certain that a passion for accumulation must inevitably lead to a supply of commodities beyond what the structure and habits of such a society will permit to be consumed.[23]

Even "propensity to spend" was included in his terminology.[24] "Whenever capital increases too fast," he maintained, "the motive to accumulation diminishes, and there will be a natural tendency to spend more and save less."[25] On the other hand, "when profits rise, the motive to accumulation will increase, and there will be a tendency to spend a smaller proportion of the gains, and to save a greater."[26] In his opinion savings tended to increase faster than the national income in prosperous times.[27] Nor are the

[20] *Ibid.*, p. 293.

[21] *Principles*, pp. 374, 450–51, 464–66, and 487–88. He stated, for instance, "With regard to the capitalists who are so engaged [in production], they have certainly the power of consuming their profits, or the revenue which they make by the employment of their capitals; and if they were to consume it, with the exception of what could be beneficially added to their capitals, so as to provide in the best way both for an increased production and increased consumption, there might be little occasion for unproductive consumers. But such consumption is not consistent with the actual habits of the generality of capitalists. The great object of their lives is to save a fortune, both because it is their duty to make a provision for their families, and because they cannot spend an income with so much comfort to themselves, while they are obliged perhaps to attend a counting-house for seven or eight hours a day" (p. 465).

[22] *Ibid.*, pp. 365–66. [24] *Ibid.*, p. 469.

[23] *Ibid.*, p. 365. [25] *Ibid.*, p. 516. [26] *Ibid.*

[27] *Ibid.*, pp. 465–66. He stated: "Almost all merchants and manufacturers save, in prosperous times, much more rapidly than it would be possible for the national

foregoing expressions isolated examples of Malthus' assumption of psychological propensities. On the contrary, such an assumption is basic to his general theory.

There seems little need to point out the importance of psychological propensities in Keynes's theory. It is unquestionably true that the entire superstructure of his general theory rests upon basic assumptions which he makes concerning the habits of human beings. We are all familiar with his three "fundamental psychological factors," namely, the "propensity to consume," the "psychological attitude to liquidity," and the "psychological expectation of future yield from capital assets."[28] His argument is studded with such related concepts as "inducement to invest," "propensity to save," "propensity to spend," "propensity to hoard," and "liquidity preference." He lays it down as

> a fundamental psychological law, upon which we are entitled to depend with great confidence both *a priori* from our knowledge of human nature and from the detailed facts of experience [that] men are disposed, as a rule and on the average, to increase their consumption as their income increases, but not by as much as the increase of their income.[29]

It seems undeniably true that the validity of his theory of changes in "effective demand," and consequently much of his general theory, depends upon the soundness of this assumption.[30] It is admitted, of course, that Keynes has developed much more thoroughly than Malthus the importance of psychological propensities in economic theory.

An outstanding feature of the theories of Malthus and Keynes is that both have rejected Say's law[31] and have gone behind cost of production to effective demand. Let us examine first Malthus'

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capital to increase, so as to keep up the value of the produce. But if this be true of them as a body, taken one with another, it is quite obvious that, with their actual habits, they could not afford an adequate market to each other by exchanging their several products."

[28] *General Theory*, pp. 246–47.

[29] *Ibid.*, p. 96. He makes this assertion repeatedly (cf. pp. 29–30, 97, 98, 114, 120, 127, and 251).

[30] Malthus' theory of effective demand rests upon essentially the same postulate (cf. *supra*, p. 905; also *infra*, pp. 909–10).

[31] Malthus, *Principles*, pp. 353–54; Keynes, *General Theory*, p. 26.

ideas on effective demand. Although he did not expressly define the term, by "effective demand" Malthus meant "the power and the will" of the community to demand commodities.[32] He emphasized demand for consumers' goods, but there is no evidence that he completely disregarded demand for capital goods. He agreed with Smith, Ricardo, and others that the progress of wealth depends upon saving and a cumulative process of capital formation.[33] His disagreement with them was on the following grounds. Smith and the Ricardian school revered "parsimony" and considered that the greater the propensity of a given community to save, the more rapid would be the progress of wealth enjoyed by it. Malthus opposed this generalization because he believed that saving could be pushed to excess.[34] That is, he argued, for every economy at any stage in its development there is a certain proportion between the amount of income saved in a given period and the amount spent for consumption which is most conducive to the progress of wealth. Some saving and capital formation are necessary for the growth of wealth. The amount of saving, however, cannot be pushed too far at the expense of consumption because such a process would reduce effective demand for commodities,

[32] *Principles*, chap. vii.

[33] *Ibid.*, pp. 8–9 and 352 ff.

[34] Concerning the necessary balance between savings and consumption, Malthus wrote:

"Adam Smith has stated, that capitals are increased by parsimony, that every frugal man is a public benefactor, and that the increase of wealth depends upon the balance of produce above consumption. That these propositions are true to a great extent is perfectly unquestionable. No considerable and continued increase of wealth could possibly take place without that degree of frugality which occasions, annually, the conversion of some revenue into capital, and creates a balance of produce above consumption; but it is quite obvious that they are not true to an indefinite extent, and that the principle of saving, pushed to excess, would destroy the motive to production. . . . . If consumption exceed production, the capital of the country must be diminished, and its wealth must be gradually destroyed from its want of power to produce; if production be in a great excess above consumption, the motive to accumulate and produce must cease from the want of will to consume. The two extremes are obvious; and it follows that there must be some intermediate point, though the resources of political economy may not be able to ascertain it, where, taking into consideration both the power to produce and the will to consume, the encouragement to the increase of wealth is the greatest" (cf. *ibid.*, pp. 8–9).

In chap. vii, sec. ix, of his *Principles*, Malthus applied this idea to the post-Napoleonic wars situation.

thus lowering profits and eliminating the entrepreneur's motive to produce. It was his opinion that in general "demand is quite as necessary to the increase of capital as the increase of capital is to demand."[35] This was true because "they mutually act upon and encourage each other, and neither of them can proceed with vigour if the other be left far behind."[36] He branded as false the Ricardian-Say argument that "the desire of accumulation will occasion demand just as effectually as a desire to consume."[37] In this connection he stated:

> I cannot by any means agree with you in your observation that "the desire of accumulation will occasion demand just as *effectually* as a desire to consume" and that "consumption and accumulation equally promote demand." I confess indeed that I know no other cause for the fall of profits which I believe you will allow generally takes place from accumulation than that the price of produce falls compared with the expense of production, or in other words that the *effective* demand is diminished.[38]

He clearly recognized, finally, the significance of the prevailing distribution of income and wealth as a factor in determining the propensities of a community to save and spend, and, consequently, its effective demand.[39]

The theory of effective demand is the heart of Keynes's general theory. He employs the term to mean the amount the community is expected to spend on consumption plus investment in a given time period.[40] Keynes, just as Malthus, grants that for the progress of national income there must be a cumulative process of capital formation. He characterizes as "absurd, though almost universal," however, the idea that "an act of individual saving is just as good for effective demand as an act of individual consumption."[41] Such an idea, he explains, "has been fostered by the fallacy . . . . that an increased desire to hold wealth, being much the same thing as an increased desire to hold investments, must,

[35] *Principles*, p. 399. [36] *Ibid.*

[37] Cf. *Letters of David Ricardo to Thomas Robert Malthus*, p. 43.

[38] *Economic Journal*, XVII (1907), p. 275, Malthus' letter to Ricardo of October 9, 1814, published with a note by Professor Foxwell (Malthus' italics).

[39] *Principles*, pp. 9–10, 418–19, 430–31, 479–86, and 507.

[40] *General Theory*, p. 29. [41] *Ibid.*, p. 211.

by increasing the demand for investments, provide a stimulus to their production; so that current investment is promoted by individual saving to the same extent as present consumption is diminished."[42] Keynes holds to the argument that excessive savings can shut off the effective demand of the community. He deplores "in many academic discussions of capital . . . . an inadequate appreciation of the fact that capital is not a self-subsistent entity existing apart from consumption."[43] "On the contrary," he continues, "every weakening in the propensity to consume regarded as a permanent habit must weaken the demand for capital as well as the demand for consumption." He likewise observed the significance of the pattern of income distribution as a factor in determining effective demand.[44]

The similarity between Malthus' and Keynes's ideas upon effective demand are even more apparent if we examine the part effective demand plays in each man's theory of employment. Malthus has constructed a business-cycle theory around the processes of saving, investment, and consumption. As business conditions improve and profits increase, he explained, capitalists and other wealthy people have a tendency to save a larger portion of their income.[45] This increase in saving serves to employ more "productive" laborers and to increase the quantity of goods available for purchase.[46] In view of the fact that in the short run the number of laborers remains the same, and because it takes time for them to develop new consumption habits and to cultivate a taste for luxuries,[47] the aggregate demand of labor for consumer goods cannot increase fast enough to fill the gap in effective demand which has been opened by the saving of the capitalists, landlords, and other wealthy persons.[48] The result is that the increased

[42] *Ibid.*

[43] *Ibid.*, p. 106.

[44] *Ibid.*, pp. 92 and 109.

[45] *Supra*, pp. 905 f.

[46] *Principles*, pp. 351 ff. Malthus, like Smith, defined "productive labor" as that resulting in material objects which satisfy human desires (cf. chap. i, sec. ii, esp. pp. 49–50).

[47] *Ibid.*, pp. 358–59 and 469–70; also Keynes, *Essays in Biography*, p. 140, Malthus' letter of January 26, 1817, to Ricardo.

[48] *Principles*, pp. 359–60.

supply of goods can be sold only at prices lower than the cost of production, profits are wiped out, and "both the power and the will to save" are brought to an end.[49]

It is patent that Malthus explained the collapse of profits in terms of a deficient consumer demand which grows out of the saving process. Somewhere in the circular income flow funds become stagnant. He was not very explicit, but he seemed to imply that, because of consumption habits which change only slowly, laborers tend to hold increasingly large sums of idle money as their incomes expand. It is very difficult to discover whether or not he believed that everything saved becomes invested. At one point he remarked that "it is stated by Adam Smith, and it must be allowed to be stated justly, that the produce which is annually saved is as regularly consumed as that which is annually spent, but that it is consumed by a different set of people."[50] In another place he noted, however, that "if, in the process of saving, all that was lost by the capitalist was gained by the labourer, the check to the progress of wealth would be but temporary, as stated by Mr. Ricardo; and the consequences need not be apprehended."[51] He was of the opinion that in the saving process labor does not gain everything "lost" by the capitalist. The general impression he gave, although he definitely stated it nowhere, is that hoarding does play a significant role in aggravating a deficiency in effective consumer demand.[52] He declared, for example, that "a very serious error" of Ricardo, Say, and James Mill "consists in supposing that accumulation insures demand; or that the consumption of the labourers employed by those whose object is to save, will create such an effectual demand for commodities as to encourage a continued increase of produce."[53] It seems fair to conclude that

[49] *Ibid.*, pp. 352–53.

[50] *Ibid.*, p. 31. Malthus went on to state that "no political economist of the present day can by saving mean mere hoarding" (p. 32).

[51] *Ibid.*, p. 369.

[52] There is strong evidence that Ricardo and Say felt that Malthus' theory of a deficient consumer demand depended on the existence of hoarded funds (cf. *Ricardo's Notes on Malthus' Principles*, pp. 164, 173–74, and 225; *Ricardo's Letters to Malthus*, pp. 43, 45, and 54; *Say's Letters to Malthus*, pp. 34–36).

[53] *Principles*, p. 359.

in Malthus' theory excessive savings cause a damming-up of idle purchasing power, but he was not altogether clear as to where the damming-up process takes place.

Malthus employed his theory of effective demand to explain changes in the level of national income and employment. He pointed out the close relationship between changes in effective demand, changes in the level of national income, and changes in the volume of employment of labor.[54] He argued that increases in effective demand lead to a higher aggregate value of the national product, to higher profits, to an expanding demand for labor, and, hence, to a higher national income.[55] Decreases in effective demand, on the other hand, lead to a decline in the aggregate value of the national product, to reduced profits, to a contracting demand for labor, and, hence, to a lower national income.

Although Malthus made much use of profits in his theory, the "marginal efficiency of capital" concept escaped him completely. Likewise, not only did the "liquidity preference" theory of interest elude him, but apart from mentioning several times the "interest of money" and pointing to a relationship between the interest rate and profits,[56] he overlooked entirely the rate of interest.

There is no need in this paper to present a detailed account of Keynes's theory of employment.[57] For the purpose of comparing it with Malthus' thought upon the same subject, perhaps a brief outline would be helpful. The main line of argument is as follows. When, for any reason, employment of labor increases, there will likewise occur an increase in the community's aggregate real income.[58] "The psychology of the community" is such, however, that aggregate consumption increases with an expansion of aggregate income, but not by so much as the increase in income.

[54] *Ibid.*, chap. vii, esp. secs. vii and viii.

[55] *Ibid.*, pp. 417–22.

[56] *Ibid.*, pp. 13, 158, 318–19, 372–73, and 476.

[57] For brief outlines of Keynes's theory of employment, cf. *General Theory*, pp. 27–32 and chap. xviii. Also, A. P. Lerner, "Mr. Keynes' General Theory of Employment, Interest and Money," *International Labor Review*, XXXIV (1936), 435–54; J. E. Meade, "A Simplified Model of Mr. Keynes' System," *Review of Economic Studies*, IV (1936–37), 98–107; G. Cassel, "Keynes' General Theory," *International Labor Review*, XXXVI (1937), 437–45.

[58] *General Theory*, pp. 28 ff.

The result is, therefore, that businessmen would lose money if the entire increment of employment were devoted to producing consumers' goods. Unless there is to occur a decline in the level of employment, there must be enough current investment to absorb the balance of output over consumption. Otherwise the businessmen's receipts would be below the amount required to maintain the level of employment. Thus, given the propensity to consume, the "equilibrium level of employment" depends upon the amount of current investment. The amount of current investment depends upon the "inducement to invest," which, in turn, is a derivative of the relationship between the "schedule of the marginal efficiency of capital" and the "complex of rates of interest on loans of various maturities and risks." If the propensity of a community to consume and the rate of new investment are given, then there will be only one level of employment consistent with equilibrium, since any other level would lead to an inequality between the aggregate supply price of output and the aggregate demand price. The prevailing level of employment, therefore, depends upon effective demand. It cannot be greater than full employment because the real wage of labor cannot be less than the marginal disutility of labor. There is no reason in general to expect it to be equal to full employment, which is not the usual case as assumed by the classical school, but is a special case realized only when the propensity to consume and the inducement to invest stand in a particular relationship. That is, it can only exist when "by accident or design" current investment affords an amount of demand just equal to the excess of the aggregate supply price of the output resulting from full employment over what the community chooses to spend on consumption when it is fully employed.

Malthus did a remarkable job of fitting the idea of effective demand into a general theory of employment. The weakness of his argument seems to be that, in placing major emphasis upon consumption expenditures, he overlooked the significance of investment expenditures as a part of effective demand. Keynes has made a considerable advance over Malthus because he has given proper weight to the importance of the volume of current invest-

ment expenditures, as determined by the schedule of the marginal efficiency of capital and the interest rate.

Another point upon which the theories of Malthus and Keynes can be compared is in regard to the role of money. Ricardo, Say, and Mill considered money to be merely a lubricant in the exchange process.[59] This was not true of Malthus. He was, perhaps, the first writer to speak of "purchasing power" of money.[60] It is certain that he understood the activating influence monetary changes can have on economic life. He stated, for example, the following:

> Theoretical writers in Political Economy, from the fear of appearing to attach too much importance to money, have perhaps been too apt to throw it out of their consideration in their reasonings. It is an abstract truth that we want commodities, not money. But, in reality, no commodity for which it is possible to sell our goods at once, can be an adequate substitute for a circulating medium, and enable us in the same manner to provide for children, to purchase an estate, or to command labour and provisions a year or two hence. A circulating medium is absolutely necessary to any considerable saving; and even the manufacturer would get on but slowly, if he were obliged to accumulate in kind all the wages of his workmen. We cannot therefore be surprized at his wanting money rather than other goods; and, in civilized countries, we may be quite sure that if the farmer or manufacturer cannot sell his products so as to give him a profit estimated in money, his industry will immediately slacken. The circulating medium bears so important a part in the distribution of wealth, and the encouragement of industry, that to set it aside in our reasonings may often lead us wrong.[61]

Changes in the value of money, with their resultant effect upon the value of the national product, profits, the volume of employment, and the national income, have an integral part in his general theory.[62]

In the Preface of his *General Theory*, Keynes explained that when he wrote his *Treatise on Money* he "was still moving along the traditional lines of regarding the influence of money as something so to speak separate from the general theory of supply and demand."[63] Before he had finished it, however, he "had made

[59] Cf. *supra*, p. 902, n. 4.

[60] *Principles*, pp. 399 and 493.

[61] *Ibid.*, pp. 361–62 n. The same sentiment is expressed later (cf. p. 444).

[62] *Ibid.*, chap. vii, particularly sec. viii.

[63] *General Theory*, p. vi.

some progress toward pushing monetary theory back to becoming a theory of output as a whole." He felt that in his *General Theory* he had completed the task.[64] He deplored "the conviction, which runs, for example, through almost all Professor Pigou's work, that money makes no real difference except frictionally and that the theory of production and employment can be worked out [like Mill's] as being based on 'real' exchanges."[65] The significance of money, he asserted, springs from its being a "link between the present and the future."[66] That is, "we cannot even begin to discuss the effect of changing expectations on current activities except in monetary terms."[67]

Malthus and Keynes both suggested the use of a public works program to increase effective demand. In the concluding section of his *Principles*, Malthus asserted that the commercial depression in 1815–20 was brought on because the transition from war to peace had witnessed "a general diminution of consumption and demand."[68] He felt that this fall in demand could be explained partially at least by the fact that taxes which "had been returned" at the cessation of hostilities, and "the excess of individual gains above expenditure," both of which had been so largely employed as government revenue during the war, were probably saved for the most part in the post-war period, thus causing a decline in consumption.[69] In order to restore an effective demand which would assure an increase in the national income and would encourage further investment, Malthus advocated a public works program for the maintenance of "unproductive consumers."[70] In a most revealing statement he expressed the following belief:

[64] *Ibid.*, p. vii.

[65] *Ibid.*, pp. 19–20.

[66] *Ibid.*, p. 293.

[67] *Ibid.*, p. 294.

[68] *Principles*, p. 499.

[69] *Ibid.* He pointed out: "If some of the principal governments concerned spent the taxes which they raised, in a manner to create a greater and more certain demand for labour and commodities, particularly the former, than the present owners of them, and if this difference of expenditure be of a nature to last for some time, we cannot be surprised at the duration of the effects arising from the transition from war to peace" (p. 500).

[70] Malthus argued that a community characterized by a deficient effective demand required a body of unproductive consumers, e.g., "menial servants, doctors, and lawyers." He included anyone whose efforts did not result in material objects

It is also of importance to know that, in our endeavours to assist the working classes in a period like the present, it is desirable to employ them in unproductive labour, or at least in labour, the results of which do not come for sale into the market, such as roads and public works. The objection to employing a large sum in this way, raised by taxes, would not be its tendency to diminish the capital employed in productive labour; because this, to a certain extent, is exactly what is wanted; but it might, perhaps, have the effect of concealing too much the failure of the national demand for labour, and prevent the population from gradually accomodating itself to a reduced demand. This however might be, in a considerable degree, corrected by the wages given. And altogether I should say, that the employment of the poor in roads and public works, and a tendency among landlords and persons of property to build, to improve and beautify their grounds, and to employ workmen and menial servants, are the means most within our power and most directly calculated to remedy the evils arising from that disturbance in the balance of produce and consumption, which has been occasioned by the sudden conversion of soldiers, sailors, and various other classes which the war employed, into productive labourers.[71]

It was Malthus' opinion that a public works program would stimulate an increase in the national income and would bring about a rise in profits. At such a stage it would be possible to save some of the increased profits and thus to rebuild the capital equipment lost during the latter years of the war.[72]

Keynes also perceived the significance of a public works program as a stimulus to effective demand.[73] Malthus was concerned with the increase in the expenditures of unproductive consumers. Keynes stressed not only the increased consumption expenditures occasioned by a public works program, but also increased expenditures on investment goods. Also, he employed the multiplier principle to show the cumulative effect of public expenditures.

There is one other basis upon which the theories of Malthus

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available for market sale. He stated, e.g., the following: "It has been already shown that, under a rapid accumulation of capital, or more properly speaking, a rapid conversion of unproductive into productive labour, the demand compared with the supply of material objects, would prematurely fail, and the motive to further accumulation be checked, before it was checked by the exhaustion of the land. It follows that, without supposing the productive classes to consume much more than they are found to do by experience, particularly when they are rapidly saving from revenue to add to their capitals, it is absolutely necessary that a country with great powers of production should possess a body of unproductive consumers" (*ibid.*, p. 463).

[71] *Ibid.*, pp. 511–12. [72] *Ibid.*, pp. 512–13. [73] *General Theory*, pp. 114–28.

and Keynes may be compared. We have seen that both writers have considered the volume of employment to be a function of effective demand.[74] Both have also made use of relative movements in real and money wages in their wage theory. Malthus traced changes in real and money wages during the fourteenth to the nineteenth centuries and reached the conclusion that with rising prices real wages fell.[75] He explained, however, that "the periods of the lowest wages, or of the greatest falls in real wages have been, when a considerable rise in the price of corn has taken place under circumstances not favourable to a proportionate rise in the price of labour."[76] By such circumstances he meant those in which the increase in the supply of labor was greater than the increase in effective demand for it occasioned by a rising price level and increased profits. He was of the opinion that when "a fall in the value of money is accompanied, as it frequently is, by a rapid increase of capital," the effective demand for labor may increase to such a degree that money wages rise faster than the price of corn, and real wages increase. To substantiate his argument, he pointed out that

> in the fall in the value of money which took place from 1793 to 1814, and which was unquestionably accompanied by a great increase of capital, and a great demand for labour, I am strongly of opinion, that if the price of labour had not been kept down by artificial means, it would have risen higher in proportion than the average price of corn; and this opinion is, I think, fairly borne out by facts.[77]

For the economy as a whole, therefore, he realized that under favourable conditions real and money wages can move in the same direction.

Keynes, of course, has made important use of relative movements in real and money wages. In his *General Theory* he has stated that in the case of changes in the general level of wages, "the change in real wages associated with a change in money-wages, so far from being usually in the same direction, is almost

[74] Cf. *supra*, pp. 911 f. Also, cf. Malthus, *Principles*, pp. 261–66.

[75] *Principles*, chap. iv, sec. v. He measured real wages in terms of relative movements in money wages and the price of corn.

[76] *Ibid.*, p. 286.

[77] *Ibid.*, pp. 287–88.

always in the opposite direction."[78] Dunlop and Tarshis cast considerable doubt upon the validity of this conclusion,[79] and Keynes appears to have admitted that he was in error.[80]

II

In view of the degree to which Malthus anticipated Keynes's general theory, it seems pertinent to examine into the question of whether Malthus had any influence upon Keynes's thinking. In his *Essays in Biography*, published in 1933, Keynes has written an excellent account of the life of Malthus in which he sheds some light upon the effect that Malthus' ideas have had upon his own general theory.[81]

Pointing out the fact that as early as 1800 Malthus had emphasized effective demand in a pamphlet entitled *An Investigation of the Cause of the Present High Price of Provisions*,[82] Keynes termed it "a certain line of approach in handling practical economic problems . . . . which to me is most sympathetic, and is, I think, more likely to lead to right conclusions than the alternative approach of Ricardo."[83] Again, following the presentation of a quotation in which Malthus, in a letter to Ricardo, stressed the great importance of effective demand, Keynes declared:

> One cannot rise from a perusal of this correspondence without a feeling that the almost total obliteration of Malthus's line of approach and the complete domination of Ricardo's for a period of a hundred years has been a disaster to the progress of economics. Time after time in these letters Malthus is talking plain sense, the force of which Ricardo with his head in the clouds wholly fails to comprehend. . . . . I must not, however, further antici-

[78] *General Theory*, p. 10.

[79] J. T. Dunlop, "The Movement of Real and Money Wage Rates," *Economic Journal*, XLVIII (1938), 413–34; L. Tarshis, "Changes in Real and Money Wages," *Economic Journal*, XLIX (1939), 150–54.

[80] Cf. "Relative Movements in Real Wages and Output," *Economic Journal*, XLIX (1939), 425–41.

[81] It is perhaps significant to note that Keynes devoted more than half of his essay to Malthus' ideas upon effective demand, savings and investment, and general market gluts. He dealt with Malthus' life and his population theory only briefly.

[82] *Essays in Biography*, p. 122. Keynes regarded this pamphlet as "the beginning of systematic economic thinking" (cf. *ibid.*, pp. 125–26).

[83] *Ibid.*, p. 122.

pate the importance of the forthcoming publication of Mr. Piero Sraffa . . . . except to show Malthus's complete comprehension of the effects of excessive saving on output *via* its effects on profits.[84]

Keynes's *Essay* is replete with praise for Malthus' work. "If only Malthus, instead of Ricardo, had been the parent stem from which nineteenth-century economics proceeded," he exclaimed, "what a much wiser and richer place the world would be today!"[85] He regarded chapter vii, section ix, of Malthus' *Principles* as "a masterly exposition of the conditions which determine the *optimum* of Saving in the actual economic system in which we live."[86] He found that "Malthus's defect lay in his overlooking entirely the part played by the rate of interest"[87] and observed most significantly:

> Twenty years ago I should have retorted to Malthus that the state of affairs he envisages could not occur unless the rate of interest had first fallen to zero. Malthus perceived, as often, what was true; but it is essential to a complete comprehension of why it is true, to explain how an excess of frugality does not bring with it a decline to zero in the rate of interest.[88]

Could it be that the puzzle left unsolved by Malthus stimulated Keynes's thinking upon the liquidity-preference theory of interest?

Keynes's references to Malthus in his *General Theory* are disappointingly casual.[89] He dismissed the importance of Malthus' contribution with the statement:

> The idea that we can safely neglect the aggregate demand function is fundamental to the Ricardian economics, which underlie what we have been taught for more than a century. Malthus, indeed, had vehemently opposed Ricardo's doctrine that it was impossible for effective demand to be deficient; but vainly. For, since Malthus was unable to explain clearly (apart from an appeal to the facts of common observation) how and why effective demand could be deficient or excessive, he failed to furnish an alternative construction; and Ricardo conquered England as completely as the Holy Inquisition

[84] *Ibid.*, pp. 140–41.

[85] *Ibid.*, p. 144.

[86] *Ibid.*, p. 145 n.

[87] *Ibid.*, p. 147.

[88] *Ibid.*, pp. 147–48.

[89] *General Theory*, pp. 32, 362–64, and 371. Keynes (pp. 362–64) quotes several passages from Malthus without comment and refers his readers to his essay on Malthus.

conquered Spain. . . . . The great puzzle of Effective Demand with which Malthus had wrestled vanished from economic literature. You will not find it mentioned even once in the whole works of Marshall, Edgeworth and Professor Pigou, from whose hands the classical theory has received its most mature embodiment. It could only live on furtively, below the surface, in the underworlds of Karl Marx, Silvio Gesell or Major Douglas.[90]

There can be little doubt that Keynes was influenced by Malthus' ideas, but it is impossible to say to what extent. It does appear, however, that there is more of Malthus in Keynes's *General Theory* than Keynes himself has realized.

III

If the findings of this paper are valid, Malthus, coping with the question of involuntary unemployment in the post–Napoleonic wars period, was led to adopt and to develop to a remarkable extent the same line of approach which Keynes has made in our own day to the problem of involuntary unemployment. Not only has he anticipated much of Keynes's general theory, but it is evident that Keynes has been influenced by some of Malthus' ideas.

A comparison of the theories of Malthus and Keynes can be made on several grounds. Writing from a background of involuntary labor and capital, both men condemned the classical school's assumption that such unemployment could not exist and both set out to explain the reasons for its occurrence. The general structures of Malthus' *Principles* and Keynes's *General Theory* are similar. Both men stressed the dynamic nature of economic phenomena. More specifically, a comparison can be made of their ideas on psychological propensities of human beings, on savings, investment, effective demand, levels of employment and national income, on money, on public works programs, and on movements of real and money wages. It seems certain, therefore, that Malthus deserves first rank as a forerunner of Keynes.

[90] *Ibid.*, p. 32.

WHITE PAPER ON BRITISH WAR FINANCE, 1938–41[1]

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FOLLOWING last year's practice, the presentation of the British budget for 1943 was again accompanied by a White Paper on war finance, covering the period from 1938 to 1941 and containing vital information on the development of the British war economy. Like its predecessor, the White Paper of 1942 is a milestone on the curving road toward a more adequate presentation of fiscal data. Concentrated on the transition to war economy as reflected in the flow of money income and expenditure, the White Paper crystallizes both merits and demerits of current approaches to the analysis of war finance. In this review the statistical results of the document are summarized and some of the issues which it raises are considered. The basic tables of the White Paper are reproduced in a somewhat simplified form.

NATIONAL INCOME AND THE CURRENT USE OF RESOURCES

Table 1 shows the sources and disposal of national income for the years 1938, 1940, and 1941. From 1938 to 1941 net national income increased from £4.6 to £6.3 billion, but most of this gain was a reflection of price rise rather than of increased real output. The increase of net national income in real terms for this period may be estimated at £400 million, or less than 10 per cent.[2] This stands in striking contrast to the increase in net national income in the United States from $77.3 billion in 1940, the last pre-war year, to an estimated $115 billion in 1942.[3] Allowing for a price rise of between, say, 15 and 20 per cent over the period, this would still leave an increase of at least 20 per cent in real terms.

Table 2 shows the application of economic resources to current use.[4]

[1] The reader is urged to refer to the original of the White Paper reproduced in the June, 1942, issue of the *Federal Reserve Bulletin* and to a review of last year's White Paper by Professor Seymour Harris in this *Journal*, February, 1942.

[2] For a discussion of this estimate see below, p. 931.

[3] The Department of Commerce definition of national income, here used, differs from the British mainly in including interest paid on public debt and in excluding corporate net income taxes.

[4] Total product for current use is measured as either (1) the total of private-consumption expenditures at production cost plus public expenditures on goods and

The outstanding feature is the large volume of disinvestment, amounting to £1 billion in 1940 and £1.3 billion in 1941, excluding lend-lease imports from the United States in both cases. Compared with a 38 per cent increase in net national income in current prices from 1938 through 1941, total expenditures on resources in current use rose by over 80 per

TABLE 1

NET NATIONAL INCOME AND EXPENDITURE

(In £ Millions)

	1938	1940	1941
a) Net national income*	4,595	5,585	6,338
b) Rent	373	383	379
c) Profits, interest†	1,351	1,542	1,722
d) Salaries‡	1,081	1,176	1,216
e) Wages‡	1,790	2,484	3,021
f) Net national expenditure	4,595	5,585	6,338
g) Personal expenditure on consumption at production cost§	3,584	3,871	3,863
h) Public expenditures at market price‖	833	3,056	4,182
i) Net investment at home¶	406	− 286	− 493
j) Net investment abroad**	− 55	− 759	− 798
k) Other††	− 173	− 297	− 416

* Income of factors of production before taxation. Excludes depreciation and replacement allowances and interest on public debt.

† Excludes interest on national debt.

‡ Includes pay allowances to officers and men in service.

§ Excludes indirect taxes specifically on consumption but includes subsidies.

‖ Includes public expenditures on goods and services only.

¶ Derived as residual by deducting items *g*, *h*, *j*, and *k* from item *a* or *f*. Includes war losses made good.

** Public and private. Excludes lend lease.

†† Indirect taxes other than on consumption, and war risk insurance premiums.

cent. Of this increase, nearly 40 per cent was contributed by disinvestment. In the United States, on the contrary, net capital formation in 1940 and 1941 exceeded that of 1939, so that the increase in gross national income from 1940 to 1941 was largely a reflection of increased output.

Table 1 indicates a significant change in the sources of national income. Of the increase in net national income, 71 per cent arose through

services at market price or (2) net national income plus disinvestment minus net investment. For years of net investment the total product for current use thus falls short of the gross national product and for years of net disinvestment the product for current use is larger.

increased wages, 21 per cent through increased profits and interest payments, and 8 per cent through increased salaries. As a result, the share of wages in net national income rose from 39 per cent in 1938 to 48 per cent in 1941; that of interest, profits, and rents declined from 37 per cent to 33 per cent; and that of salaries fell from 23 to 20 per cent.[5]

Over the 1938–41 period changes in the disposal of national income, indicated in Table 2, were even more drastic than those in its sources.

TABLE 2

APPLICATION OF RESOURCES TO CURRENT USE

(In £ Millions)

	1938	1940	1941
a) Income from resources applied to current use	4,417	6,927	8,045
b) Net national income	4,595	5,585	6,338
c) Net disinvestment	− 351	1,045	1,291
d) Other*	173	297	416
e) Expenditures on resources applied to current use†	4,417	6,927	8,045
f) Private-consumption purchases at production cost‡	3,584	3,871	3,863
g) Public expenditures on goods and services	833	3,056	4,182
h) As percentage of *a* or *e*	18.9	44.1	52.0
i) As percentage of *b*	18.1	54.7	66.0

* Indirect taxes not specifically on consumption plus war risk insurance premiums.

† For 1940 and 1941, years of net disinvestment, this item exceeds the gross national product; for 1938, a year of net investment, it falls short of gross national product by output for future rather than current use.

‡ Equals expenditures at market price plus subsidies minus indirect taxes on consumption.

Of the increase in total expenditures on resources applied for current use, government outlays absorbed 94 per cent for the period as a whole, and more than the entire amount for the period from 1940 to 1941. For both periods the increase in public expenditures much surpassed the increase in net national income. Such increase in the sterling level of private expenditures as occurred from 1938 to 1940 (there was little change from 1940 to 1941) did not suffice to maintain real consumers' outlays

[5] A similar tendency is noticeable for the United States. The Department of Commerce figures for salaries and wages as percentage of total national income, after having been quite stable for a number of years, increased noticeably in the first and second quarters of 1942. In the manufacturing industries there was also a notable increase in wages as a percentage of the wage and salary total.

in the face of rising prices. Correcting for increased direct taxes and price rise, the White Paper estimates the real level of consumers' expenditures to have fallen by 15–20 per cent for the period from 1938 to 1941. In terms of 1938 prices, therefore, growing war expenditures not only absorbed the entire increase in the gross product but severely curtailed the volume of goods and services going to private use. Again the picture differs greatly from that in the United States, where from 1940 to 1941 there was an increase of $22 billion in government plus private expenditures, the private share in the increase amounting to about two-thirds of the total. Comparing the second quarter of 1942 with that of 1941, however, the pattern of the United States figures begins to resemble that of the British. War expenditures over this period increased by $8 billion, while output available for private use showed some decline.[6]

To obtain a measure of the intensity with which the economy is applied to war purposes, public expenditures on goods and services are taken as a percentage of the total product for current use. Since in England a considerable portion of this total was provided by disinvestment, this ratio proves much smaller than that between public expenditures and net national income. Of the total product for current use, public expenditures amounted to 19 per cent in 1938, 44 per cent in 1940, and 52 per cent in 1941. Of net national income, the same expenditures amounted to 18, 55, and 66 per cent for the three years, respectively. To indicate the more advanced stage of the British war effort, this might be compared with corresponding estimates for the United States where public expenditures on goods and services as percentage of gross national product amounted to about 16 and 20 per cent for 1940 and 1941, respectively. For the second quarter of 1942 this figure is estimated at 30 per cent.[7]

PERSONAL INCOME, CONSUMPTION, AND SAVING

Table 3 shows changes in the size and disposal of British personal incomes. Incomes received rose from £4.6 billion in 1938 to £6.2 billion in 1941, while incomes disposable after payment of direct taxes increased from £4.2 billion in 1938 to £5.4 billion in 1941. That is, for the period as a whole, one-fourth of the increase was absorbed by direct taxation. Comparing the increase in disposable income after taxes

[6] M. Gilbert and R. Bangs, "National Income and the War Effort," *Survey of Current Business*, August, 1942.

[7] *Ibid.*, p. 15.

with the increases in consumption expenditures and savings, we find a large and increasing part of the increment in income—32 per cent from 1938 to 1940 and 66 per cent from 1940 to 1941—reflected in additions to savings. The marginal propensity to save increased from 0.32 to 0.66, or by 50 per cent, and personal savings as percentage of disposable income rose from 3 per cent in 1938 to 15 per cent in 1941.

TABLE 3

DISPOSAL OF PERSONAL INCOMES

(In £ Millions)

	1938	1940	1941
a) Personal income received*	4,648	5,596	6,207
b) Direct taxes†	464	617	842
c) Disposable personal income	4,184	4,979	5,365
d) Expenditure on consumption	4,041	4,424	4,550
e) At production cost	3,584	3,871	3,863
f) Indirect taxes‡	457	553	687
g) Personal savings§	143	555	815
h) *d* as percentage of *c*	96.6	88.9	84.8
i) *g* as percentage of *c*	3.4	11.1	15.2
j) *g* as percentage of *a*	3.1	9.9	13.1

* Total disposable money income before taxation. Includes interest on government debt but excludes undistributed profits.

† Includes income tax and death duties.

‡ Excess of indirect taxes specifically on consumption over subsidies, which amounted to £15 million in 1938, £70 million in 1940, and £139 million in 1941.

§ Derived as residual item by deducting direct taxes and consumption expenditures at market price from personal income received. Includes undischarged direct-tax liabilities amounting to £18 million for 1938, £82 million for 1940, and £150 million for 1941.

The same tendency for increased savings is observed in the United States, where net savings of individuals increased from $6.3 billion in 1939 to $12.7 billion in 1941. The increment in savings amounted to 25.0 per cent of the increase in disposable personal income for the period 1939–40 and 34 per cent for the period 1940–41. The increase in savings is even more striking if later figures are considered. The share of incremental income absorbed in increased savings amounted to 44 per cent from the first to the second quarter of 1941, 130 per cent from the third to the fourth quarter of that year, and 158 per cent from the first to the second quarter of this year.[8]

[8] Estimates of Department of Commerce, *Survey of Current Business*, August, 1942, p. 15.

The absorption of such a large and increasing portion of additional income into savings in both countries might appear to provide striking support for the view that an expanding volume of savings may be relied upon to close the inflationary gap. This conclusion, however, cannot be accepted without reservation. The propensity to save, in times of war, depends upon numerous factors, including national morale, the availability of goods, and the effectiveness of price and rationing controls. In addition, such controls as restriction of consumers' credit and tax inducements to save must be allowed for. All these influences are subject to sudden change, and any extrapolation is highly speculative.

Also, there is some doubt whether the statistics for savings should be taken at their face value. Both the White Paper and the Department of Commerce figures for savings are derived as residuals by subtracting estimated consumption expenditures from an estimated figure for disposable income. The correctness of the residual figures for savings thus depends on that of the estimates for income and consumption and cannot be more reliable than its rather heroic antecedents. It is significant to note that the amounts involved in the basic income and expenditure estimates greatly exceed the amounts involved in the savings residual, so that a very small percentage error in the income or expenditure figures would provide a very large error in the residual amount derived for savings. If, for instance, British consumption expenditures for 1941 had been underestimated by 10 per cent or personal incomes had been overestimated by 5 per cent, the savings residual, instead of showing an increase, would have declined from 1940 to 1941.[9]

It is interesting to compare the estimate of increased savings derived by the residual method with a direct measure of the increase in individual assets of various kinds, such as holdings of government securities and cash balances. In making this comparison, we find that the White Paper estimates for increased personal savings (adjusted for undischarged direct-tax liabilities) in 1940 just about equal the year's sale of those types of government securities which are likely to have been purchased by individual investors; for 1941 residual savings exceeded the increase in securities by only £64 million. If both estimates are correct, this nearly complete absorption of increased savings in new government securities would indicate that increases in other forms of individual assets, including an increase in cash and deposit holdings of

[9] Income figures are derived primarily on the basis of wage, dividend, and salary statistics, while consumption figures are derived primarily on the basis of value of finished product. Statistical results obtained by the two methods may differ.

perhaps £500 million, were offset by dissaving through using up existing consumers' durables.[10]

Finally, it should be emphasized that it is the volume of consumption expenditures, not the amount of savings, which determines inflationary pressure.[11] The mere fact that a given increase in savings has been recorded over a past period of rising money income and less rapidly rising output tells us nothing about the extent to which price rise has occurred or has been prevented. In the last analysis it is the volume of consumer expenditures relative to consumer goods available that determines the inflationary price pressure. Thus, the greater the *portion* of the increase in income that is absorbed in increased savings, the less prices rise. But, given any ratio of incremental savings to incremental income less than unity, both prices and savings will increase the more, the greater the increase in income. This, of course, holds whether the statistical estimate for savings has been derived via the "residual" or the "direct" method.

This point may be illustrated by a simplified model of income-savings relationships in a series of time periods. In Table 4 five time periods are shown, and four possible cases are applied for Periods III–V. These cases are case (*a*), where individuals increase their savings by the entire addition to income; case (*b*), where three-fourths of the addition to income is added to savings; case (*c*), where one-half is thus added; and case (*d*), where the entire addition to income is spent. Throughout it is assumed that the total of individual savings is diverted into government securities and that total real output remains constant. Allowance for changes in total output or in individual balances could be made but would not alter the picture for our purposes. Period I shows a stable condition in which government loans and expenditures just equal individual savings, amounting to one-half of a total income of 100. In Period II the government increases its expenditures by 25, financed by greenbacks of the bank-credit or printing-press variety, and

[10] In 1940 and 1941 total bank deposits and currency increased over £1 billion, and it might be assumed that about 50 per cent of this increase was added to individual balances.

A similar comparison may be drawn for the United States. Net savings for individuals have been estimated at $12.7 billion for 1941 by the Department of Commerce. The Securities Exchange Commission, by using the direct approach of aggregating the increase in liquid assets, arrives at a total of liquid savings of $11.6 billion (*Federal Reserve Bulletin*, September, 1942, p. 876).

[11] I am indebted to G. L. Bach for suggestions relating to this section of the paper.

individuals maintain previous expenditures. An initial price rise of 25 per cent results, and the government's share in total output increases from 50 per cent to 60 per cent. Thereafter, we assume money expenditures of the government to be raised to a level sufficient to maintain the 60 per cent share in real output reached in Period II.

Let us consider the behavior of expenditures, prices, and savings in Periods III–V. Total expenditures throughout are highest in case (*d*)

TABLE 4

INFLATIONARY SPENDING, SAVING, AND PRICE RISE

	Private Income			Public Income			Total Spent or Income Received	Per Cent Price Rise
	Carried Over	Spent	Saved	Loans	Greenbacks	Spent		
Period I	100	50	50	50	.....	50	100	.....
Period II	100	50	50	50	25	75	125	25
Case (*a*):								
Periods III–V	125	50	75	75	.....	75	125	.....
Case (*b*):								
Period III	125.0	56.3	68.7	68.7	15.8	84.5	140.8	13
Period IV	140.8	60.3	80.5	80.5	10.0	90.5	150.8	7
Period V	150.8	62.8	88.0	88.0	6.2	94.2	157.0	4
Case (*c*):								
Period III	125.0	62.5	62.5	62.5	31.3	93.8	156.3	25
Period IV	156.3	78.2	78.2	78.2	39.1	117.3	195.5	25
Period V	195.5	97.6	97.6	97.6	48.8	146.4	244	25
Case (*d*):								
Period III	125.0	75.0	50	50	62.5	112.5	187.5	50
Period IV	187.5	137.5	50	50	156.3	206.3	343.8	83
Period V	343.8	293.8	50	50	390.7	440.7	734.5	114

and lowest in case (*a*), and the same holds for prices. Savings are highest in case (*a*) at the outset but tend toward a situation, reached in Period V, where case (*c*) savings exceed those of cases (*a*) and (*b*). Case (*d*), by assumption, precludes an increase in savings. The model thus illustrates a basic principle of inflationary finance under full employment. If the government wishes to increase its share in real output or to maintain this increased share by way of greenback finance, prices, expenditures, and hence savings will increase the more, the smaller is the marginal propensity to save.

According to the numerical assumptions of our model, the increase

in prices will proceed at an increasing rate if less than one-half of the additional income is saved; the increase per period will be constant if one-half is saved, and there will be a declining rate of increase if the savings increment exceeds one-half of the addition to income. Dropping our specific numerical assumptions but retaining those of constant real output and of a constant government share therein, we may state this relationship in more general terms, as follows: The percentage rise in prices from one period to the next will remain constant if the increment in income is divided between savings and consumption in the same proportion as was the income of the preceding period, that is, if the propensity to save remains constant. The rise in prices will proceed at an increasing rate if the marginal propensity to save falls below the average propensity to save, and it will proceed at a decreasing rate if the marginal propensity to save lies above the average propensity. In the latter case the price rise will cease, once total individual savings reach that share of total income which is absorbed by government expenditures.

THE SOURCES OF GOVERNMENT FINANCE

Table 5 shows the sources of British government expenditures for the years 1938, 1940, and 1941. Taxes, which had contributed 87 per cent of the total in 1938, contributed 38 per cent in 1940, and 40 per cent in 1941. At the same time, total taxes as percentage of net national income rose from 22 per cent in 1940 to 30 per cent in 1941 and may be expected to reach 37 per cent in the current fiscal year.[12] Over 40 per cent of the deficit to be met by borrowing at home was financed by drawing upon the banks. Small investors contributed close to one-third in 1940 and one-fourth in 1941, thereby diverting somewhat less than 10 per cent of personal incomes after taxes into the purchase of new government securities.

To the extent that government funds are obtained from borrowing, their source is found in various "offsets to deficit," including personal savings, undistributed profits, and disinvestment. These offsets are shown in the lower part of Table 5. Of the increase in deficit from 1938 to 1941, by far the largest part, or 70 per cent, was offset by disinvestment, while personal savings furnished another 25 per cent. Of the total increase in government expenditures from 1938 to 1941, 52 per cent was reflected in increased disinvestment, 27 per cent in increased savings, and 19 per cent in increased taxes. To interpret these figures cor-

[12] For the United States the tax-income ratio amounted to 23 per cent for the calendar year 1942 and is estimated at about 25 per cent in the fiscal year 1943.

rectly, the nature of the "offsets to deficit" must be considered more closely.

That the aggregate of the offsets to deficit is equal to the amount of deficit is a truism. Statistically, offsets and deficits are bound to be

TABLE 5

SOURCES OF PUBLIC EXPENDITURES OF CENTRAL GOVERNMENT

(In £ Millions)

	1938	1940	1941
Total receipts or expenditures	1,015	3,333	4,663
Taxes and other revenues	885	1,253	1,875
Deficit	130	2,080	2,788
Fiscal sources of deficit			
Finance through Gov't agencies*	253	543	247
Borrowing at home	− 123	1,537	2,541
Mostly from small lenders†	4	467	601
Mostly from banks‡	− 189	686	1,130
Mostly from mixed sources§	62	384	810
Offsets to deficit			
Personal savings‖	143	555	815
Undistributed profits¶	313	268	213
Disinvestment**	− 351	1,081	1,540
Fund surplus††	25	176	220

* Includes net contribution from budgetary funds, extra budgetary receipts, and Reconstruction Finance Corporation Loan.

† Includes Post-Office and Treasury savings-bank accounts, national savings certificates, and defense bonds.

‡ Includes fiduciary issues, Treasury bills, bankers' deposit receipts, and increases in security holdings by eleven London clearing banks.

§ Includes other public issues not purchased by banks and tax-reserve certificates.

‖ Includes provision for accrued taxes.

¶ After payment of taxes.

** Excludes war losses made good, which provide an offset to disinvestment of £36 million in 1940 and £249 million in 1941.

†† Includes surplus on extra-budgetary funds and local authority surplus.

equal, for the simple reason that the disinvestment and savings items have been derived as residual amounts.[13] Theoretically, the equality between offsets and deficits merely indicates that for any past period

[13] From the two basic equations,

$$\text{Disinvestment} = \text{Factor income} - (\text{private} + \text{public expenditure at market price}) - \text{indirect taxes} \qquad \text{(I)}$$

and

$$\text{Savings} = \text{Income paid out} - \text{personal expenditures at factor price} - (\text{direct} + \text{indirect taxes}), \qquad \text{(II)}$$

it follows that

$$\text{Deficit} = \text{Savings} + \text{disinvestment}. \qquad \text{(III)}$$

the aggregate market price of all goods sold must equal the total amount expended on such goods. To the extent, therefore, that the government has spent out of deficit, individuals must have saved, output must have been increased, or disinvestment must have occurred.

It follows that an inflationary gap, which is an excess of purchasing power to be spent over the value of available goods at prevailing prices, can be thought of only as related to future conditions of supply and demand. Once the future arrives, income must either be saved or go into current outlays on consumption; and, if the dollar value of outlays on consumption should exceed the dollar value of goods available for this purpose, their prices will rise, and eventually the dollar value of supplies will be inflated until it meets that of demand. In short, what on Monday is expected to become Tuesday's gap will by Wednesday have vanished in Tuesday's price rise.[14]

We conclude that the balancing of government expenditures with tax receipts and offsets to deficit gives little evidence regarding the most crucial problem, that is, the economic sources of government finance in real terms. The balance sheet merely gives us an *ex post* picture of what taxes and savings turned out to be under the influence of (among other factors) fiscal policies over the period under consideration. By presenting the balanced accounts in terms of current prices, that is, by failing to allow for price changes as a real source of government finance, the problem most interesting from the point of view of war finance, is ruled out by definition. There can be no doubt, of course, that reduced consumption resulting from price rises may be an economic source of government finance, if only the Treasury manages to increase its expenditures from inflationary sources sufficiently fast to keep one step ahead of rising private incomes and outlays. In the Germany of 1923, for instance, the real source of government expenditures was the decline in the volume of goods which private buyers could obtain by spending their rapidly rising sums of money income. And yet, a table could have been computed for this period showing 100 per cent offsets to deficit, primarily in the form of a huge increase in the volume of savings in terms of current prices.

A complete picture of the real sources of increased government expenditures must cover changes in real terms of net income, disinvestment and current output for private use. Piecing together various bits of information supplied by the White Paper, an estimate of these

[14] See also Milton Friedman in *American Economic Review*, June, 1942, p. 314.

sources might be ventured. The figures here arrived at are based on rather broad assumptions, but the process of derivation well illustrates the nature of the problem.[15]

Net national income in current prices increased by about £1.7 billion from 1938 to 1940. If we assume an average price rise of 20 per cent, this represents an increase in net national income of £400 million in real terms.[16] Consumption expenditures at production cost rose by £280 million over the period. Allowing for a rise in consumers'-goods prices of about 30 per cent, we find that consumption expenditures in real terms declined by about £900 million.[17] Disinvestment, finally, increased by £1.6 billion in current prices or in real terms by an estimated £1.4 billion.[18] In the aggregate, £2.4 billion worth of resources was thus placed at the disposal of the government (see Table 6).

This total of released resources, in turn, equals the real increase of government expenditures from their 1938 level. By comparing the increase in real terms with that in terms of current prices, the estimated rise in the price of government goods can be deduced. Government expenditures on goods and services at market prices rose from £830 million in 1938 to £4,180 million in 1941. In terms of expenditures at production cost these two figures may be estimated at £800 and £3,900

[15] N. Kaldor's review of the White Paper in the *Economic Journal* of June–September, 1942, came to my attention only after this paper had been submitted and accepted for publication. Kaldor undertakes much the same kind of analysis as is presented on this and the following pages. References to his statistical conclusions are contained in subsequent footnotes.

[16] The assumption of a 20 per cent increase in the general level of prices is probably on the low side, considering that the official cost-of-living index rose by 28 per cent, while wholesale prices rose by 60 per cent. Kaldor's (p. 218) estimate of an increase of only 18 per cent rests largely on the assumption of constant labor productivity.

[17] Actually, the rise in prices of consumers' goods probably exceeded 30 per cent. The increase in the official cost-of-living index by 27 per cent fails to reflect depreciation in quality and excess-ceiling prices quoted at black markets. Kaldor (p. 216) estimates an increase of 35 per cent after allowing for the effects of increased indirect taxes and subsidies.

[18] Disinvestment abroad rose by £746 million, which, if adjusted for the depreciation of the pound sterling, amounts to about £650 million in 1938 prices, leaving an increase of about £600 million in real terms. Home disinvestment increased by £900 million in current prices. If a price rise of 30 per cent is allowed for, this amounted to an increase of £800 million in real terms. Kaldor (p. 219) estimates a real increase of about £500 million in net disinvestment abroad and of £880 million in net disinvestment at home.

million, respectively.[19] Adding the estimated real increase in government expenditures of £2.7 billion to the reported outlay of £800 million in 1938, we obtain for 1941 an estimated total of £3.5 billion of government expenditures at production cost, in terms of 1938 prices. If this is compared with the reported total of £3.9 billion in current prices, it appears that the prices of government goods have risen by about 11 per cent. This does not seem unreasonable, since we may expect the increase in government prices to be less than that of other prices.

TABLE 6

REAL SOURCES OF ADDITIONAL GOVERNMENT FINANCE, 1938–41

	Million £	Percentage
Increased output	400	15
Disinvestment	1,400	52
Reduced consumption	900	33
Total	2,700	100

While these estimates of the real sources of war finance may have little claim to statistical accuracy, they furnish a truer picture of these sources than do the "offsets to deficit" given in Table 4. On the basis of our figures, it appears that 52 per cent of the real increase in government expenditures was drawn from disinvestment, 15 per cent from increased output, and 33 per cent from reduced consumption.[20]

Differences in British and American war finance to date reflect the divergent production and consumption patterns of the two countries. In Great Britain the task was one of expanding war production at the cost of reduced civilian output and increased disinvestment. In the United States the situation was one of rapidly increasing production for

[19] Government expenditures at production cost equals government expenditures at market price minus a certain percentage of the sum of indirect taxes (other than those on consumption), plus insurance premiums and subsidies. The percentages used are 25 per cent for 1938 and 50 per cent for 1941, corresponding roughly to government expenditures on goods and services as per cent of net national income at market price. The percentage rise in the price of government goods arrived at by Kaldor (p. 220) is 17 per cent.

[20] For an estimate of the real sources of increased war expenditures in the United States (second quarter, 1941—second quarter, 1942) see Gilbert and Bangs, op. cit., p. 12.

war purposes with a simultaneous increase in civilian output. Accordingly, the need for fiscal restriction arose sooner in Great Britain than here. During recent months, however, the picture in the United States has begun to change rapidly, owing partly to an incipient shrinkage in civilian supplies but mostly to an excessive increase in money incomes. The period in which we could afford a much less stringent fiscal policy than Great Britain, is past.

Yet, if one compares the financial program of the two countries for the current fiscal year, one finds that Great Britain plans to collect over 37 per cent of its national income in taxes, whereas we plan to collect about 25.[21] One also finds that Great Britain expects to finance over one-half of central government expenditures requiring domestic finance out of taxes, whereas we have provided for tax receipts of considerably less than one-third of federal expenditures. It is not altogether surprising, of course, that Great Britain, having entered the struggle two years before we did, should have advanced further toward placing the fiscal side of its economy on a complete war basis than we have. Still, the comparison supports the view that our fiscal program under the Revenue Act of 1942 is inadequate. The British case shows that a more stringent fiscal effort *can* be made, but not without considerably higher taxes (refundable or not) upon incomes in the lower-middle ranges than we have dared to face so far.[22] Great Britain, in spite of such an effort, had to place considerable reliance on price inflation as a real source of war finance. Without a comparable effort in the United States, we face a much worse prospect.

[21] Taxes collected by all types of governments are included in this estimate. If only central government taxes are included, the percentages are 17 per cent for the United States and 34 per cent for the United Kingdom.

[22] Contrary to general belief, the much heavier effective income tax rates in Great Britain and Canada are not balanced by lighter rates of taxes other than income taxes. As percentage of national income, taxes other than personal income taxes (of all governmental bodies) for the fiscal year 1943 are estimated at 31 per cent for Canada, 23 per cent for the United Kingdom and 18 for the United States.

NOTE ON CONCENTRATION OF ECONOMIC POWER[1]

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THIS study, as indicated by its title, purports to be a report of an investigation of the concentration of economic power in the United States. It was prepared by a number of economic specialists, each of whom dealt with concentration in a particular area. The data presented or summarized are extensive, and the evidence that concentration exists is convincing. As to the economic and social significance of concentration, the authors' conclusions, as will be noted, are implicit in their premises. They are assumed rather than demonstrated.

A careful reading of the report indicates that the real interest of the authors lies in their acceptance of the very popular current assumption that depressions are the result of an imbalance between savings and investment in which "hoarding" takes place. This underlying prepossession is obvious throughout the work.

Concentration of economic power is collateral to this major interest. It is important to the authors because it helps explain to their complete satisfaction why hoarding takes place. For example, they show that concentration of ownership makes it possible for a class described as well-to-do to receive a disproportionate share of social income in the form of rents, interest, or profits. These incomes are potential excessive saving or hoarding which tend to reduce consumption and so cause unemployment.

Concentration of economic power helps the authors account for "investment outlet deficiencies," which in turn explain why some savings are hoarded. Cantankerous investors withhold commitment of their share of the spoils because the promise of profits in the few opportunities open to them is not satisfactory or for no reason at all. Unemployment and suffering result. Savers have no sense of duty to make their wealth or income serve social ends.

Concentration, the authors believe, makes it possible for monopo-

[1] *Investigation of Concentration of Economic Power: Final Report of the Executive Secretary to the Temporary National Economic Committee.* Washington: Government Printing Office, 1941. Pp. xv+435.

lists to ignore the claims of society and base decisions on personal profit even though they restrict activity and curtail investment, thereby causing serious hardship for others.

It is not at all times clear to the reader what is meant when the term "monopoly" is used. The term appears to be applied indiscriminately to price or output control, to large-scale business, and to the ordinary corporation. The basic assumptions of the authors give them little reason to seek differences in these organizations, since there is in each the great concentration of power which gives effect to every decision to curtail production or to withhold investment, thereby helping to create an imbalance between savings and investment.

Concentration of power, according to the authors, makes rigid price policies effective for corporations which seek thus to protect their profits. Rigid prices increase the disadvantages of those industries which have flexible prices, thereby making an expansion in investment in those lines impossible. At the same time rigid prices can be maintained only if the corporations involved see to it that expansion in investment is ruthlessly suppressed. In each case investment outlets are decreased in number and hoarding is encouraged.

Concentration of authority, it is said, tends to encourage the use of technological improvements. Output per man-hour is increased, but wages and prices are kept as near as possible to old levels. Because of concentrated power, benefits of increased efficiency are pre-empted by the "relatively few wealthy persons who own the American corporations" and who hoard when they should spend. Unemployment is the inevitable result. To the reader this appears to be an application of Marx's "surplus-value" theory, even to the extent of explaining the depression which follows as an economic device to clear the market of exploited surplus value which has found lodgment in the hands of business owners.

The evils of concentration cause the authors to cast a baleful eye toward life insurance. A handful of self-perpetuating boards control billions. State laws, the integrity of managers, and other factors cause insurance companies to reject all but the choicest of investments. The result is uninvested savings or hoarding. In spite of scarcity of opportunities to invest deposits, insurance companies use high-pressure methods to secure new contracts, thereby aggravating the problem of hoarding. Life insurance companies, it is implied, must be held at least partly responsible for idle money, idle machines, and idle men. Anyway, it is noted, life insurance companies deal largely with the well-to-

do, the "upper income groups who are already making disproportionate contributions to the pile of idle money." It is implied that insurance companies, like banks, have been perverted to the service of the wealthy.

Emphasis in the text gives evidence that the authors are as much interested in proposing changes in public policy as they are in presenting facts concerning concentration of economic power. To an extent the title is misleading. Real interest centers around the possibility of changing from a high-saving economy into a high-consumption economy in order to raise the "proportion of consumption to total income." To this end the authors inject a number of proposals, most of which would divert income from the hands of businessmen who, according to their theory, will save, thereby causing unemployment, to consumers, who will spend, thereby making employment and prosperity.

They propose that prices of consumer goods be lowered as fast as economies are perfected. This will reduce the profits of owners and eliminate their power to save or hoard. If prices of goods are not lowered, according to this plan, to cover any increase in efficiency, they propose to raise wages high enough to absorb the increase. This proposal does not rest on any abstract theory that labor is the sole creative factor but rather on the basic assumption that income which goes to workers helps to preserve prosperity, while that which goes to owners tends to clog up the machinery and cause depressions.

Another proposal seeks to increase the number of investment opportunities, as the authors believe that savers sometimes hoard because of scarcity of investment outlets. Funds should be supplied to small business—by government agencies if necessary—possibly on the ground that it is governed in its investment policies not by the profit rate but by the volume of funds at its disposal. With increased funds it will expand employment. The government should embark on a vigorous antitrust campaign, since trusts and monopolies, because of their control over patents and necessary productive facilities, are one of the most serious causes of deficiency of investment outlets.

A third proposal is to levy a penalty tax on undistributed profits. This would tend to turn over hoarded earnings to stockholders and thereby encourage them to make further investments or to expand their consumption. It would break the power of the corporation to menace prosperity by hoarding its surpluses while it waits patiently for desirable investments.

Another proposal is to remove certain legal restraints on economic activity. In this class come building codes, if designed to protect vested rights of plumbers, electricians, and others, instead of the public. Also included are those state restrictions, designed to benefit special interests, which interfere with the free movement of goods across state lines. Slated for elimination are all other restraints designed to give a monopoly advantage to groups or classes, even if labor is such a group.

The reader is impressed with the fact that this sweeping proposal helps him make sense out of an apparent inconsistency in the orders of two different government agencies as reported by the press. One agency, according to news reports, actively supports almost every demand made by labor for higher wages, shorter hours, better working conditions, and vacations with pay. No demand is too extreme for this agency to throw the full weight of the government behind it. Another agency, the Department of Justice, through Mr. Thurman Arnold castigates certain practices of labor as severely as could any member of the National Association of Manufacturers.

Mr. Arnold charges labor with racketeering and monopolistic practices as vicious and unlawful in restraint of trade as any business combination. So virulent is his attack that (according to the press) his superior, the Attorney-General, felt compelled to disavow his criticisms in order to square the administration with labor. Yet, if the reader applies the theory set forth by the authors of this monograph, this apparent conflict within the administration is no evidence of schism in the government, no attack of the right hand upon the left, no house divided against itself. The first agency is thinking solely in terms of diverting income from owners and employers who might hoard it, thereby destroying prosperity, to laborers who would use it for consumption, thereby enhancing prosperity. Presumably Mr. Arnold is attacking the labor racketeer because he uses his power precisely as the business monopolist is charged with doing—to restrict productive activity, to destroy investment outlets, and to reduce employment and national income. On the basis of the authors' theory of employment the reader may well conclude that what appears on the surface to be inconsistency in the administration is really the height of consistency. The two agencies are dealing appropriately with entirely different practices of labor, one increasing and the other decreasing the flow of consumer income.

A fifth proposal calls for the expansion of "public investment," which, according to the text of the monograph, may include expendi-

tures for war, housing, fire and police protection, schools, roads and highways. Apparently the authors treat investment, public expenditure, and putting money into circulation as synonyms.

They quote with apparent approval a statement of A. A. Berle, Jr., that when the government gives a banking organization power to "create money, it is no longer necessary to offer an interest rate to stimulate that creation." One may conclude that the authors are in effect suggesting that the substitution of a government banking agency, say a modified Reconstruction Finance Corporation, for existing private banks would completely eliminate all cost of money and credit and so remove completely all necessity for examining a proposed government expenditure to see whether it could pay interest on the investment or provide the equivalent of interest in reduced cost of production. As soon as ability to earn interest is abandoned as a test for public investment, it makes little difference what kind of expenditure is made, since each offers stimulation to employment and increase in consumer money income. Expenditure becomes a synonym for investment even though a strong imprint of "boondoggling" is apparent.

Another proposal deals with the fiscal program. Taxes, the reader is told, must be used with the greatest care. Any tax on consumers, or on income on the way to consumers, would be deflationary. Such taxes would reduce employment. They should in no case be used until conditions of full employment are reached.

But any tax on funds in the hands of the well to do is indorsed by the authors as correct in principle. They admit that these funds might, in the absence of the tax, be invested and so increase production and stimulate employment in the manner desired. But they might just as readily be hoarded and so throw prosperity into reverse. The authors seem to conclude that it is safer to tax and spend as a form of prosperity insurance than to take chances on the whims of savers.

Borrowing is approved for such purposes as extension of defaulted mortgages, for agricultural relief, for unemployment relief, for public works designed primarily for relief as long as loans to the government are from funds which "would otherwise have remained idle." The authors argue that while critics call such loans inflationary, they cannot be dangerously inflationary as long as there is less than "full employment."

Even if there is full employment there is danger of runaway inflation only if nothing is done to prevent it. Fortunately, they conclude, something can be done which kills two birds with one stone. After full em-

ployment a tax levied indiscriminately on both investor and consumer incomes diverts funds from consumption, reduces inflationary pressure, and repays the debt which set the economy on the road to prosperity. The authors have discovered a plan which in economics rivals the scheme of the fabled operator of the fox farm, who proposed to use cats to feed the foxes and fox carcasses to feed the cats so that he could supply the market with costless fox pelts. Here is a plan which can carry our economy from debt-ridden bankruptcy to debt-free prosperity without cost.

The authors solemnly observe that increase in the public debt has been needlessly feared by unenlightened critics of government spending who overlooked the fact that "growing public debt and taxes have never held back our economic development in the past, but, on the contrary, have contributed to it . . . . that the public economy is just as much a part of the production system as private enterprise. . . . ."

The assertion that debt and taxes have never held back economic development may astound the uninitiated reader. He might agree with the authors that public debt and taxes and private debt have been important agencies of economic progress, but not for the reasons advanced by the glittering generalizations of the authors. The commonly accepted reason is that debt, whether public or private, and even taxes may commit funds to more productive uses than would otherwise be probable or may transfer funds to more efficient hands. Never has it been generally believed, as asserted by the authors, that the mere spending of borrowed funds or tax proceeds induces prosperity. What the loan or the tax was used for was the basis of the solvency of the borrower and the source of the increase in the social income. Wrong commitments meant disaster to the borrower or the taxpayer and loss of social income.

Readers may go further and argue that if correctly utilized taxes pay themselves and debts retire themselves. Either a government or a private loan may "come laughing home," leaving in its wake higher wages, higher social income, interest for the lender, and profits or other advantages for the borrower. Everybody wins and nobody loses. This process, characteristic of capitalism, has been continuously in operation for hundreds of years.

This acknowledgment is not an indorsement of the authors' fox-cat plan to provide goods without cost. There has always been an inexorable requirement that loans or taxes be invested productively. History gives no support for the authors' apparent conclusion that if the gov-

ernment will tax and tax or borrow and borrow and spend and spend, it can in a few hours' airplane time cover the long and tortuous trail from mud huts and straw pallets to steam heat and inner-spring mattresses which required long and arduous centuries for oxcart capitalism.

The belief that there is a more and a less productive use to which funds may be put and that different results will be realized from a choice between them will cause the unenlightened reader to wonder whether the authors show any interest in the decision-making function. He will search in vain for any serious recognition of the entrepreneurial function. Instead, the authors assert that "new investments will naturally make use of new ideas and processes, so that an increase of output per man-hour will occur, yielding productive gains over previous production from an equal expenditure of capital and labor." Here is no evidence of acceptance of the belief of earlier economists that new processes and new ideas must be discovered and that the discoverer is an indispensable agent for the advancement of material civilization. New ideas and new processes are assumed by the authors in the term "technology." Their use was "natural." This is logical in the light of their basic thesis that spending is the source of prosperity. One decision is as good as another, for, they say, "it is investment that maintains purchasing power, the level of employment, and national income." Soundness of investment is not important. "Employment is created whether or not projects are self-liquidating." The reader is left to surmise from their discussions that the authors believe that entrepreneurs are private profit-seeking owners who do nothing but obstruct investment and production. This is the apparent point of the extensive catalogue of misdeeds set forth in the report.

This writer suggests that the critical reader need not hold that entrepreneurship and ownership are synonyms. Entrepreneurship he may define as the function of making decisions concerning production. It may be performed by a private owner or by a government functionary. The significance of the term does not rest on who makes the decision but rather on what takes place as a result of it. Economic benefits come not from the wishful thinking of the chooser but from the productivity of the process chosen. Entrepreneurs with the best intentions in the world may wreck the whole economic structure.

This mention of the entrepreneurial function gives point to the ominous statement of the authors that our economy has become "mature." This, they hasten to say, does not mean "senile." As they present the matter, maturity is a state in which business is hesitant and

unemployment is natural. The way out, they conclude, is to resort to political managers who need not base their investment decisions on probability of success or failure, profits or losses. They do not need to limit their activities because of a scarcity of proposals which promise to be self-liquidating, since the simple process of lowering the interest rate to zero makes every project sufficiently self-liquidating.

Other economists, critical of the foregoing theory, interpret maturity to be a state in which only the less difficult discoveries of new processes and ideas have been made, leaving those which call for a higher degree of skill and ability. They would hold that opportunities for new investments are available if only entrepreneurs are not too blind to see or if governments do not adopt measures such as artificial increases in taxes, wages, and other costs which make development difficult or impossible.

The fact that opportunities are hard to see does not prove that they do not exist. Sismondi, Malthus, and Marx long ago, in the early days of the industrial revolution, were more lugubrious about the future of the capitalist system than are the authors of this monograph. The day of dire disaster which these early critics foresaw has been continuously pushed into the future as discovery after discovery has revolutionized industry and commerce. Who can be certain that the day of new discoveries which add to social welfare is past or that the rate of discovery must slow down? Upon what ground should our economy be shifted, as the authors urge, from reliance on constructive ideas to reliance on political manipulation of economic life? The problem is a choice not between laissez faire and government management but between one productive proposal and another. It does not matter whether the choices are made by individuals or governments, provided they are based upon maximum efficiency and not upon wishful thinking which takes income and the solution of all problems pertaining to it for granted. Investment in the sense of finding new goods or new ideas, not investment in the sense of putting money into circulation, is imperative if progress is to continue.

As suggested above, the authors' use of the term "investment" is confusing. It is used to refer "to the physical fact of spending money for capital goods." Another statement is that "the end product of the investment process is physical capital, the implements of production . . . . that give off services for a period of years." It is explained that capital goods may be producers' capital (such as plant or equipment) or consumers' capital (such as houses) or community capital (such as bridges and roads). This definition obviously refers to durable or

"sunk" capital. The permanence of the commitment appears to have been the basis of the statement above that expenditures for war and similar purposes are investments. Since the permanent type of commitment is usually associated with savings, failure to use savings could with propriety be described as hoarding. All this is obvious.

Confusion arises when one attempts to check the authors' discussion of the relation of investment to unemployment with what actually happens in real life. In spite of the emphasis placed on investment by the authors and in spite of their failure even to consider the matter, working or circulating capital which operates on a short-term basis has a more direct connection with employment than long-time investments. This type of capital is spent for fuel, power, materials, labor, and supplies.

No one can doubt that the investment by a manufacturer of the proceeds of a bank loan creates employment in precisely the same manner as investment of savings in durable physical capital so graphically described by the authors. As the authors indicate (even though they make little use of the fact), banks, through loans and discounts, create the deposits which result in employment. These deposits formerly ran into billions. In volume they far exceeded the amount involved in savings. They led to investment without saving.

The records available to the authors would show that orders of the Federal Reserve Board in 1920 cut about one-half of the Federal Reserve notes and from five to seven billions of deposits from books of the member-banks. Again, when the depression struck in 1929 created deposits shrank some 50 per cent, thereby reducing the total volume of money by some twenty-five billion dollars. In each case reductions in demand-deposit purchasing power came about through the process of of liquidating short-term loans and through failure to make new loans for the next production period. The total volume of mediums of exchange fell, the banks' reserve ratio rose above the legal and the usual working limit. Yet it is difficult to isolate anything resembling saving or hoarding, unless rising bank reserve ratios are hoards. Owners of raw materials and finished products who refused to take distress prices for their goods and laborers who refused to take sweatshop wages for their labor were hoarding just as were the businessmen who refused to use their capital without satisfactory remuneration. These matters ought at least to have been recognized by the authors before they put so much reliance on fluctuations in "sunk" capital that they would propose a

revolution of the economy based on a preconception that such hoarding existed and that it was the proximate cause of unemployment.

Even the irregularity in expenditures for fixed physical capital may be closely related to the credit policies which led to irregularities in demand deposits. The World War I period of inflationary credit and the post-war period of secondary inflation both saw a great spurt in fixed investments. The reader may wonder that the authors chose these spurts as the norm by which to measure the succeeding depression. In these periods commercial and other short-term loans took similar spurts. They grew out of definite public policies of easy money. The government changed its policy toward loans after the Armistice and thereby checked the inflationary use of credit in 1920. Expansion of both commercial loans and fixed capital investment stopped. Depression followed. The authors ignore these facts and explain the depression of 1920 and 1921 as hoarding by greedy businessmen, banks, and life insurance companies.

The "easy-money" spree of the late twenties was checked by the world-wide fear of depositors that our credit institutions might not remain solvent. A recession set in which lasted through the thirties. The authors use the same explanation—hoarding. It does not occur to them to examine both prosperity and depression phases to see whether abuse of commercial credit might account for both the recovery and the depression phases and the irregularity of fixed capital investment found in them. It has not occurred to them that governmental agencies might be responsible for the abuses. Instead they wave the problem aside and assume the answer as shown by the following generalization: "Periods of prosperity give rise to excessive savings in the higher income brackets derived from exceptional profits, followed by periods of depression induced by the corresponding reductions of labor income in the lower brackets."

As hinted above, the basic theories of the authors appear to stem from Marx as closely as do the theories of leaders of the great Russian Revolution. There is one difference: A Russian director of socio-economic life knows as well as the American capitalist that it makes a difference whether government funds are spent on memorial arches in Moscow or on wheat growing in the provinces. Railroads, dams, transmission lines, and farm equipment bring different economic returns than murals in the Kremlin or theaters in Moscow. Unlike the authors, the Russian reformer no longer believes that every expenditure made

by the government is an "investment." It is alleged that he learned this lesson at the cost of the lives of a few million Russian people.

What the authors have really done was to take a few terms well known to economists, such as "saving," "investment," and "hoarding" and redefine them with meanings which assume the conclusions presumed to be established by research. On the basis of these definitions and their assumptions they proceed to create an armchair economy which retains the form of capitalism but supplies the substance of collectivism. Income and goods are pawns to be moved about from owner to consumer, without compensation, by political chess players in the same manner as in totalitarian Russia or Germany. There is one difference—it is not necessary to let on that this has been done.

It is doubtful whether the theory developed in this work has serious value from an academic standpoint. Its mass of data gives it the form of scholarly economic research. But its bland assumptions and politically convenient preconceptions are so serviceable to political operatives that one may well wonder whether economists of a known vogue have been taken by Congress on a political excursion into the field of economics or whether these economists, bubbling over with the new truth, have secured the use of a congressional committee as a sounding-board to publicize their doctrines.[2]

[2] It is acknowledged that charges made throughout this discussion that the authors have followed preconceptions are based upon this writer's own preconceptions. The objection is not that the authors have preconceptions, or that they are different from those of the writer, but that they substitute them for facts in cases in which facts do not fit into their preconceived pattern. There is ground for serious objections to preconceptions if they are made the basis for sweeping social changes not supported by other essential considerations.

BOOK REVIEWS

Investment and Business Cycles. By JAMES W. ANGELL. New York: McGraw-Hill Book Co., Inc., 1941. Pp. xviii+363. $3.50.

The business-cycle model which forms the central core of this book is a sort of verbal marriage of the multiplier and the acceleration principle similar, in many respects, to the mathematical marriages effected by Samuelson, Tinbergen, Kaldor, and others. The ceremony is, to be sure, very differently performed, and the offspring bear little or no resemblance, but the principals are the same. Aggregate current income is the sum of current consumption and current investment. These two quantities are both assumed to be functions of past aggregate income (and its derivatives). A closed system of equations results whose solution may, under suitable conditions, yield a cyclical pattern of behavior for the variables. It is clearly recognized that this system does not act *in vacuo*. "Exogenous" forces are constantly impinging upon it, affecting the amplitude, timing, and characteristics of the fluctuations. But the self-generating character of the cycle is a consequence of the relations set forth in the model.

The author will complain, and with some justice, that in thus describing his model I have left out its most important feature—"anticipations." The level of investment is said to be determined proximately by the anticipations (of marginal yield) of investors and suppliers of funds. Likewise the level of consumption depends in part upon the anticipations (less clearly defined) of consumers. To close the system, however, the author makes anticipations a function solely of the past behavior of aggregate income. A good many illuminating comments are made on the nature and importance of anticipations. But I am inclined to think that this particular structural member in Mr. Angell's edifice is less useful and necessary than he would imply.

It is not necessary in establishing empirically the validity of the theoretical system, since some function of previous income must be substituted for it before a test is possible. For purposes of verification, it is immaterial whether we say that investment is determined by income or that investment is determined by anticipations which are determined by income. Further, its usefulness in explaining the relation between income and investment is limited by its lack of precision.

When the term "anticipations" has reference to a particular observable or operationally definable quantity such as the expected marginal yield on new investment, it would be less ambiguous to refer to this quantity directly. When it is intended to connote a general state of optimism or pessimism, it is surely misleading to imply that it can be measured along the ordinate of a graph or be inserted as a variable in a function forming part of a numerical system.

Mr. Angell gives a good description of the reasons for the cyclical behavior of the system in economic rather than in mathematical terms. The increase in income occurring during the upswing produces a number of effects which ultimately depress investment. Cost-price relationships become unfavorable, capital equipment accumulates at a rate which reduces the need for replacement, the propensity to spend declines, and the rate of increase of income falls off, producing the familiar effects described by the acceleration principle. No attempt is made to indicate what the magnitude of the various factors must be to insure that the solution will be cyclical.

Very important issues of form and substance are raised by three chapters focused on an analysis of the multiplier. This reviewer is convinced that, for reasons too extensive to be discussed here, the concepts of hoarding and of the circular velocity of active money familiar to readers of Mr. Angell's earlier works are not useful tools with which to analyze changes in spending. To avoid the charge of "mere terminological controversy," I shall try to state in Mr. Angell's own terms what seems to me to be the central flaw in these three chapters. The argument as he puts it forward is, briefly, as follows: Assume new "original" spending to be done with new money. The velocity of circulation of the previously existing money stock will be unaffected, since there is no reason to expect otherwise. Some of the new money will find its way into idle balances. There is no reason to suppose that that which continues to circulate will have a velocity different from the average. If, therefore, we know the average size of current additions to effective hoards, and if we know the average income circulation period we can quickly calculate the increase in income produced per unit time period by the new spending.

One weak link in this chain, as Mr. Walter Salant pointed out in the June, 1941, issue of this journal, is the assumption that the velocity of circulation determines the rate at which spending, consumer *and business*, reacts to changes in income. Mr. Angell would presumably contend that the empirical validity of this assumption is shown by the

constancy of the velocity of circulation. But, even accepting his statistical evidence for this constancy (which seems to me shaky), the conclusion does not follow. If the supply of new money is highly elastic and reacts automatically to increased demands for it, spending can increase at any rate whatsoever without affecting either hoards or the velocity of circulation. Mr. Angell assumes implicitly throughout his argument that after the original increase in the money supply there will be no further induced increases. But, especially in the business community, the most probable reaction to an increase in sales is an immediate increase in orders financed by new bank loans. The rate at which these orders are placed has nothing to do with the average time which elapses between the receipt of money and its dispersal. Induced increases in spending can come from idle balances, from a more effective use of active balances, or from the creation of new money. It may well be that it is the ease with which, in most periods, new money can be secured that explains such constancy as may exist in the velocity of circulation.

Of the book's fourteen chapters, roughly six are devoted to the exposition of the core of the author's business-cycle theory. The remainder are devoted to its implications for a number of different matters, upon all of which it is impossible to comment adequately in the space of a review. Two chapters defend the omission from the model of the rate of interest as a significant variable. A chapter each is devoted to government spending, the secular stagnation thesis, and what was still, at the time of writing, the defense program. All these matters are discussed with the imagination, analytic skill, and caution which we have come to expect from Mr. Angell. I have devoted my comments largely to disagreement with him, because he is an economist who must be disagreed with, if at all, carefully and at length.

MAX F. MILLIKAN

Yale University

National Income and Its Composition, 1919–1938, Vols. I and II. By SIMON KUZNETS, assisted by LILLIAN EPSTEIN and ELIZABETH JENKS. New York: National Bureau of Economic Research, Inc., 1941. Pp. xxx+929, with unnumbered Tabular Index. $5.00.

The National Bureau of Economic Research began its activities by the preparation of two volumes on *Income in the United States*, published in 1921 and 1922. Twenty years later two further volumes pre-

sent the fruit of hard and constantly improving research work covering the whole inter-war period. The stages in this work have been marked by numerous monographs by Dr. Kuznets and other authors which have been issued by the National Bureau of Economic Research.

The study under review consists of five parts of which the first three are of a general character, analyzing the fundamental theoretical problems, expounding the results of the estimates, comparing them with those of other estimates (especially with the figures published by the Department of Commerce), and examining their reliability. Part IV is devoted to the basic data, sources, and methods with reference to the origin and the types of income. Part V gives supplementary data. A comprehensive as well as a tabulated Index closes the work.

The first part, on "concepts, classifications and procedures," contains the most thorough and sagacious discussion of the tricky question, "What Is National Income?" ever written in any language. None of the problems raised by the Conference on Income and Wealth is overlooked, and many new questions are put and answered. Dr. Kuznets emphasizes that the segregation of income flow from the totality of market transactions implies "an underlying scheme of values or social philosophy." Thus, according to different basic appraisals, several variants of national income are equally possible. For instance, with regard to the valuation of governmental activities, either of two opposite procedures may be adopted: the payment-price basis or the cost basis. In the first case, government is considered as a business yielding profits or deficits, reflected in positive or negative public savings; in the second, government is a body *sui generis*, the value of whose services can neither exceed nor fall short of the payments for labor and capital employed. The author adopts the first solution while admitting that "the choice between the two principles is largely between .... two evils," for neither is adequate. Excellent arguments are advanced in support of this decision. But the reviewer is of the opinion that the cost principle is really more appropriate to the special position of government in the market economy and that the estimates of national income should reflect this position; new debts contracted for current payments should be considered not as a deficit but rather as a payment to government, different in form but not in essence from taxation.

The extremely elaborate description of the changes in national income during the eventful twenty years covered deals with the general trend as well as with the response to boom and depression of the different industrial classes and types of income. Industrial distribution is assumed to remain constant in order to eliminate the influence of shifts

in that distribution on the share in the total income of wages, salaries, interests, and profits. The increase in the share of incomes from services due to the expansion of governmental activities characterizes the general trend of income, and the tremendous fluctuations of profits characterize its behavior in boom and depression. It might have been useful, in the discussion of business savings, to distinguish between corporations showing positive and those showing negative savings; and in connection with income from real estate gross rents might have been shown before taxes and other costs are deducted. These are personal wishes of the reviewer, however, and neither criticism nor a suggestion of incompleteness of the work, which is not only a comprehensive survey of the economic structure of this country but a monument to its economic statistics.

JULIUS V. WYLER

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World Organization, a Balance Sheet of the First Great Experiment: A Symposium of the Institute on World Organization. Washington: American Council on Public Affairs, 1942. Pp. xiv+426. $3.75.

The twenty authors of the papers contained in this volume address themselves to the general problem of the degree of success or failure encountered by the League of Nations between 1919 and 1939. They also explore the reasons for such success or failure as they discern and add a number of suggestions for the future. The authors—eight Americans and twelve non-Americans, both men and women—had all been in intimate contact with the League in Geneva and elsewhere. About half of them had held administrative posts under its authority—chiefly in the Secretariat; the others had acted as delegates to different sorts of meetings or had been engaged in educational work and the activity of private international organizations intimately related to the League in various fields.

Both fundamental or political questions (covenant, armaments and sanctions, mandates, minorities) and technical and detailed subject matters (communications, social questions, etc.) are discussed. Relatively little attention is given to problems of law and procedure and just about as little to organization or structure; practical problems are given chief attention. There is no extended effort to describe League organs and processes but rather a concentration of attention upon assessment of values. An Introduction is provided by the popular Norwegian leader, Carl Hambro; the International Labor Organization and

the Permanent Court of International Justice are treated by three persons intimately connected with those branches of the League system; the volume concludes with a paper on relations between the American continent and the League by Dr. Ricardo Alfaro of Panama.

As far as is known to the reviewer this is the only critical study of the League in its various aspects, and over its twenty years' career prior to the outbreak of war in 1939, available in any language. The importance of the subject can hardly be denied; whatever one's prejudices concerning the League, a careful study of the Geneva experiment—or rather "experience" as this reviewer would prefer to put it—must be of extreme value if, as seems inevitable and indispensable, we are going to continue the effort to organize the world of nations for justice and progress. If he may be allowed to quote the concluding words of his own contribution to the volume, the reviewer would repeat: "Let us extract the last drop of wisdom and guidance from the League experience without either over-rating or under-rating the importance of that experience in the evolution of international organization."

Nor does the volume appear to be noticeably one-sided in its treatment or conclusions. It is certainly not a whitewash of the League system, excusing all the failures, exaggerating all the good points, and ignoring all the sins committed in its name. As a matter of fact the authors of these papers certainly know the weaknesses and failures of the League effort better than the politicians and "publicists" who have criticized and condemned the League from the outside. They are also persons having the cause of organized international co-operation and world government very much at heart and who might therefore be expected to feel the relative failure of the League effort more keenly than the cynics who knew it was sure to fail and even hoped that their dismal anticipations would be borne out. Actually the appraisal offered here is extremely well balanced and neither a fulsome paean of praise nor a sheer tale of disaster and despair. It is what might reasonably be expected: a complex and extremely instructive story of mixed success and failure in the enterprise of developing international government.

If he might be allowed to criticize his colleagues adversely, the reviewer would complain, in conclusion, of two traits in their general treatment of League problems. These are lack of perspective and a seeming leniency in attitude which may derive partly from lack of perception, partly from lack of candor, and partly from a choice of tactics or of a certain dosage in tactics concerning which, it is true, there is great room for differences of opinion.

The first criticism is fairly simple: Most of the authors appearing in this volume are so preoccupied with the success or failure of the League as such or of some special branch of its work (economics, health, drugs, etc.) that it does not occur to them to think of the broader aspects of international co-operation or its history, and they would not even wish to turn aside to these aspects of the problem if the suggestion were made that they should do so. And yet such a broader view would certainly yield a better picture. Not that it would necessarily mitigate the criticism of the League on the ground that its problems were terribly difficult and that progress in these matters must be very slow. These things are true, but it is also true that men have been working at these problems for over three thousand years and we have some right to expect slightly greater improvement in that time than actually seems noticeable. No, the broader view is desirable simply because it would give a fuller or truer picture of the League and of both its good and its bad points.

The second matter is more serious: Most of our writers seem to refrain unduly from criticizing and condemning the short-sighted and selfish attitude and behavior of the people of the nations and their governments to which, surely, the relative failure of the League, as of all political institutions, must be traced. One might suspect them of being too wise and generous themselves, or too naïve, to perceive the depths of indifference and pettiness about them; this can hardly be entirely true. Or they might see it all but be afraid to speak out; this is less likely still. It may be that they feel that underemphasizing the elements mentioned will be more helpful than denouncing them, that pretending that they do not exist and that everybody wants the international institutions to succeed is in fact the very best way to promote the success of these institutions. To the reviewer it seems that this is a mistaken tactic and that this attitude contributed in no small degree to the failure of the League in its own time. It seems that a wise mixture of criticism and encouragement constitutes the proper solution. It is possible that a little more—or a great deal more—harsh criticism at the right time and place might have saved things from complete collapse.

These, however, are problems for the individual reader. He will be given ample material for thought on such questions and ample provocation in what the reviewer, false modesty and detachment aside, does not hesitate to call a vivid and challenging volume.

PITMAN B. POTTER

Oberlin College

The Structure of the Nazi Economy. By MAXINE Y. SWEEZY. ("Harvard Studies in Monopoly and Competition," No. 4.) Cambridge: Harvard University Press, 1941. Pp. xvi+255. $3.00.

Dr. Sweezy's study of the Nazi economy serves a double purpose. It provides a framework in which to fit her original contributions on German corporate profits and on the distribution of national income in the Third Reich. The study is also one of a series of monographs on monopoly and competition.

In order to achieve the first purpose, Dr. Sweezy has provided chapters on a large number of subjects, ranging from exchange control to the Nazi regimentation of agriculture and labor. The result is a disjointed book containing little that is new. The chapters on German corporate profits and national income constitute the "meat" of the book. Distillates of these chapters have already appeared in the *Quarterly Journal of Economics* and in the *Review of Economic Statistics.* The remainder of Dr. Sweezy's study is essentially a repetition of material that is available in standard works in the English language, especially in the books of Robert Brady, Howard Ellis, C. W. Guillebaud, and Kenyon Poole.

Dr. Sweezy's interpretation of the structure and workings of the Nazi economy cannot be said to constitute a contribution toward a better understanding of the subject. Dr. Sweezy has adopted the point of view of the German Social Democrats and regards the Nazi economic system largely as a scheme designed for the protection of the capitalist system or to line the pockets of the Nazi bigwigs. This bias is prevalent throughout the book but is especially glaring in the account of cartels and the Hermann Goering Works.

R. TIRANA

Washington, D.C.

The Politics of Mercantilism. By PHILIP W. BUCK. New York: Henry Holt & Co., 1942. Pp. viii+240. $2.00.

This well-written small volume should be of interest to teachers and students of economics. It deals with the economics as well as the politics of mercantilism—the political thought, not action, and of English mercantilism only, it should be noted. But while the fifty-four-page chapter on the economic doctrine (chap. ii, following nineteen pages on historical background, a third of which deals with mercantilist practice) is an excellent and well-documented survey, the matter which comes under the title of the book, in the next three chapters, is what is

chiefly novel and important. The most interesting result of the investigation is the fact that there is virtually nothing to be found in the voluminous writings investigated which really deals with politics in any explicit way. The author finds that the mercantilists rarely even name any classical political philosophers, ancient or modern, and take practically no notice of the controversy which raged in their country and time over such issues as the relations between the throne and Parliament or between church and state. This is true in face of the fact that the mercantilist era included the two great revolutions of English political history and the country's one experiment with a nominally republican form of government. And, on the other side, it is found that the contemporary political theorists and controversialist writers were equally oblivious of what the merchant political economists were doing.

The mercantilists have hardly more to offer in the way of concrete political devices than in the way of general theory. The most important innovations demanded were a council of trade—with no clear indication of its composition or relations to other governmental agencies, or even its powers and duties—and a bank or banks, treated in the same sketchy fashion. Workhouses to employ and discipline the poor and their children, and special mercantile courts, are also frequently advocated. In short, Professor Buck's treatment of mercantilism from the standpoint of the political scientist confirms the impression of economic students that the writings contain little which is scientifically much more than verbiage, or "preaching," and the advocacy of general results, without serious efforts at a program or inquiry into the desirability of the results themselves. The main reasonably concrete economic proposals are the notorious restriction of imports in the interest of a favorable balance of trade and the harsh regimentation of the working class, to the latter of which there were notable exceptions. The political faith in which the mercantilists obviously believed was simply that accepted by all Englishmen in the "nationalistic" period following the Renascence and Reformation. The central tenet was a strong executive, under monarchic form, in the interest of internal order, and a "strong," not to say brutally aggressive, foreign policy.

The concluding chapter of the book follows in a general way the tradition of the historians in defending the mercantilists against criticisms of Adam Smith and his successors in the economic theory field, while paradoxically admitting the truth of everything said in the most virulent attacks. The latter half of the chapter presents an interesting

comparison between mercantilist doctrine and contemporary totalitarianism. But the general parallelism is, of course, familiar matter to informed readers.

The value of the book is enhanced by an unusually adequate Index of Subjects, and a separate Index of Names and Books. But it is disconcerting to find that the latter covers only the text and its footnotes but does not include the extensive and valuable supplementary bibliographical notes (pp. 195–226) appended to the volume.

FRANK H. KNIGHT

University of Chicago

Theory of the Just Price: A Historical and Critical Study of the Problem of Economic Value. By RUDOLF KAULLA. (Translated from the German by Robert D. Hogg.) London: George Allen & Unwin, Ltd.; New York: W. W. Norton & Co., Inc., 1940. Pp. 219. $2.25.

This book is a translation into excellent English of the author's *Staat, Stände und der gerechte Preis*, published in Germany in 1936. I have not compared the translation with the original but find almost no points which arouse any suspicion of inaccuracy. Following a short introductory chapter on the nature of the problem of economic value is a historical chapter (pp. 21–72) dealing with "The Idea of the Just Price," from the Roman law to the subjective-value school. In my judgment this is the most interesting and valuable part of the book. Chapter ii is an argument that laws and state action do and must influence values, which will hardly be disputed. A section on "The Fiction of Market Value" is rather typical for work of this "institutionalist" character in assuming as representative of all prices cases in which price is largely indeterminate. This would be better expressed by saying that for many objects of exchange there is no market which is continuously effective. Chapters iii and iv on, respectively, the "Lower Limits in the Determination of Value" and the "Upper Limits . . . ." are cursory discussions of the role of cost and of utility in the determination of price, with emphasis on the multiplicity of factors involved. There will hardly be anything novel here to any mature economist; but such exposition might be useful to the younger students in connection with texts and courses which hew to the line of "fundamental principles."

Chapter v, "The State and the Just Price," is a general argument for state interference in economic life, especially in fixing rents and wages, on the ground of various imperfections, mechanical and ethical, in the competitive mechanism, with some illustrative discussion of state interference and the motives which prompt it. Two of the more interesting sections deal with unfair competition and with tariff duties. The author's argument is again typical in that he considers, at least by implication, that any situation which is not abstractly ideal is a ground for political action, in the face of the fact that in most cases a general law can hardly fail to do more harm than good. It is held (p. 182): "The State cannot evade the necessity of taking up a position with regard to these conflicts of interest in the economic life of its citizens. For nothing can alter the fact that a policy of non-intervention, no less than one of the most positive intervention, benefits some citizens and injures others." The suggestion of difficulties of regulation, but which are not recognized or dealt with, may be illustrated by the following statement: "A given wage may be just for a worker having other important sources of income and unjust for a worker with no such sources; and one and the same rent may be just or unjust according to its relative importance in the tenant's budget" (p. 168). At one point (pp. 192 ff.) we are taught that trades and professions important for society should be maintained at a remuneration in accord with their social dignity, without reference to the numbers in relation to the demand for the goods. Later (p. 203) the matter of excessive numbers is dealt with as a separate problem but without reference to the depressing effect upon other occupations of limiting access to any one or any select list. Other examples of noteworthy economic doctrine might be cited; for instance, "a natural advantage possessed by the foreign competitor in respect of costs of production may, in certain circumstances, be regarded as rendering his competition unfair." And the example given is that of foreign farmers having "much cheaper and more fertile land at their disposal" or, if "the foreign producers of any commodity pay their workers considerably lower wages . . . . or have cheaper transport facilities, it may be considered unjust to permit competition with home producers whose conditions of production and trade are less favorable" (p. 210).

FRANK H. KNIGHT

University of Chicago

The American Maritime Industries and Public Policy, 1789–1914: An Economic History. By JOHN G. B. HUTCHINS. ("Harvard Economic Studies," Vol. LXXI.) Cambridge: Harvard University Press, 1941. Pp. xxi+627. $5.00.

This reviewer rather recently had occasion to lament that there was no adequate and satisfactory history of the American merchant marine. Excellent studies of certain very limited phases of the subject were available, notably those of Albion, Morison, Clark, Benns, Maxwell, Zeis, and Saugstad, not to mention the many works chiefly devoted to the technological aspects of the old wooden sailing fleet; but a comprehensive survey stressing economic analysis of the problems involved was not to be found. It may at once be said that the volume before us goes a long way toward filling this gap. It is indispensable for anyone who wishes to study the subject in its historical aspects.

The stated purpose of this book "is to trace in considerable detail the kaleidoscopic changes which occurred in the organization and economic position of the American shipping and shipbuilding industries between 1789 and 1914, and to discuss the effects and implications of American navigation policies" (p. xix). This period the author calls that of the "Maritime Revolution." In Part I there is a general discussion of the various interests of the nation in maintaining the shipbuilding and shipping industries, together with an account of the different means employed in their protection and control, which provides a basis for passing judgment on the historical policies later described. Part II, practically half the book, is devoted to the period down to 1862, dominated by the construction and use of wooden sailing ships and the prevalence of a "free competitive, maritime economy," though there is a brief survey of colonial development. Part III covers the period 1863–1914, which saw the wooden sailing ship, at first slowly, but eventually almost completely, driven out by the iron and later the steel steamship, this being accompanied by the growth of large-scale enterprise in both the shipbuilding and the shipping industries and the development of new types of government control and protection. In these historical parts particular attention is given to the economic conditions affecting the shipbuilding industry: its organization, the various elements in construction costs, and shifts in location, as well as to technological innovations. While the development of the iron and steel steamship-building industry is not covered with quite the same thoroughness as that of the wooden sailer, the material presented on the

shipbuilding industry may be considered the most original and important contribution of the book, since research in the economic, as distinct from the more purely technological, aspects of this branch has been sadly neglected heretofore. Fully aware of the varied factors affecting the course of the carrying trade, the author covers shipping policy, trade routes, operating costs, and the varied significant factors in the developments in other countries, chiefly those in the outstanding competitor, England, which reacted on the American shipping industry.

The result of the author's analysis, as far as an explanation of the fortunes of the American merchant marine is concerned, may be said to differ from the more commonly accepted ideas chiefly in the matter of relative emphasis given the different factors involved. For the period 1789–1862, the basic factor in the success of American shipping in the foreign carrying trade is declared to be the advantage of comparative costs in wooden sailing-ship construction, supplemented by the legislation of other nations which generally prevented the purchase of American or other foreign-built ships for operation under the flags of im portant carriers. Though this comparative advantage tended to decline after 1830, the effects were largely offset during the next quarter-century by American assumption of leadership in design and construction. It is stated that the cost of operating American ships (excluding the cost of the ship) was above that of the nations of western Europe throughout the period from 1789 to 1914. Such efficiency in operation as existed was more than offset by higher wage rates and other running expenses. The decline in the shipping engaged in foreign trade after 1862 is chiefly attributed, as is commonly believed, to the shift to iron and steel steamships, in the construction of which the United States faced a competitive disadvantage (though up to 1900 some successes were secured with the development of the wooden sailing ship), the free ship-purchase policy adopted by most other shipping nations as compared with the protective policy of the United States, and continued high operating costs on American ships.

As regards general shipping policy, the author, admitting the difficulty in passing a final judgment where such varied and noncommensurable objectives are involved, concludes that down to 1860 the policy of the United States was, under the conditions then existing, wise and successful. On the other hand, during the following period the policy followed is declared unsuccessful, and this is said to have been due to a failure to adapt it to the changed conditions, to too much protection, to

instability and lack of vigor, and to a poorly planned and administered subsidy system.

There are some points in connection with the shipping industry where there is reason to believe additional research might have thrown more light on the course of events. While certain conspicuous trade routes, have been studied, there is no systematic survey of the directions taken by all foreign trade. Such a survey might have thrown added light on the decline in the percentage of American tonnage entering and clearing United States ports from 85 per cent in the early years to 67 per cent in the 1840's. The explanation that is offered for this seems hardly adequate. The effects of the reciprocity treaties on the trade with British North America seem to have been very important in contributing to the sudden drop in this percentage that occurred after 1830. The more rapid expansion of trade, 1820–60, in the routes where shipping competition was most felt, as contrasted with other routes, was also a factor in the situation. Though considerable attention is given to labor costs in ship operation, there is almost nothing on the specific requirements of the laws concerning the employment of American officers and crews or the extent to which these were enforced, and a number of the other requirements of the navigation laws tending to increase operating costs, especially after 1862, might have been given more attention. A few graphs would have been of distinct aid to the reader, and a comparison of graphs showing the differences in the fluctuations of the percentage of American tonnage entering and clearing ports and the percentage of value of foreign trade carried in American ships might suggest points for further analysis. However, these are largely matters of detail, and the volume provides a most welcome and substantial contribution to our economic history.

CHESTER W. WRIGHT

University of Chicago

Ploughs and Politicks: Charles Read of New Jersey and His Notes on Agriculture, 1715–1774. By CARL RAYMOND WOODWARD. ("Rutgers University Studies in History," No. 2.) New Brunswick: Rutgers University Press, 1941. Pp. xxvi+468. $5.00.

Every person interested in the history of American agriculture is under obligation to President Woodward for this book. Long interested in the history of New Jersey agriculture, Dr. Woodward, while searching for the location of the mysterious "Franklin Farm" more

than a dozen years ago, had placed at his disposal a much underlined and interleaved copy of John Worlidge's *Systema agriculturae*. After meticulous research Dr. Woodward not only located the farm in question but discovered conclusive evidence that it was the property not of Benjamin Franklin, as was long thought, but of Charles Read and that the underlined and interleaved *Systema agriculturae* just mentioned was Read's handiwork. Though not written for publication and somewhat sketchy, the wide range of Read's notes convinced Dr. Woodward that they constituted an important chapter in the agricultural history of this country and ought, therefore, to be published and made more readily available.

The volume under review, however, does not confine itself to Read's agricultural interests. Read, as Dr. Woodward ascertained, was an outstanding merchant capitalist and a prominent political figure in New Jersey. Book I—approximately one-half the volume—is biographical.

It is as an agriculturalist, however, that Read is most significant, and it is with his activity in this field that Book II, or the second half of the volume under review, is concerned. As an agriculturalist Read was a realist, and his notes on farming, which are reproduced here, cover substantially every phase of farm practice of his time. The material is divided into seven chapters: "The Husbandry of Soil," "The Husbandry of Plants," "The Husbandry of Animals," "The Husbandry of Bees," "Farm Structures and Farm Implements," "The Husbandry of the Household," and "Fisheries." Dr. Woodward has rearranged the notes merely to fit a pattern of presentation. He has also added annotations and analytical comment. Otherwise the notes appear as first written. Very sensibly, a glossary giving the meaning of unusual words is appended.

Each of the seven chapters is prefaced with brief introductory paragraphs. Where pertinent, these paragraphs draw comparisons between Read's notes and Jared Eliot's *Essays upon Field Husbandry*. Occasionally allusion is also made to *American Husbandry* and to George Washington's writings on agriculture. No one can read this volume without realizing the scientific turn of Read's mind, his appreciation of the numerous abuses and malpractices which characterized American agriculture in his time, and his wide acquaintance with the writings of the best Old World authorities on agriculture. His data on livestock, for example, are almost encyclopedic. Moreover, he is one of the best sources for information on colonial barns, stables, and other

farm structures. His brief statement about bees would seem to indicate, as Dr. Woodward points out, that Read had little actual experience with bee husbandry. The chapter on the household consists mainly of recipes for the preparation of foods, beverages, and medicines.

In preparing this volume, Dr. Woodward had access to extensive manuscript materials. Not only are these listed but also the works cited by Read in his notes on agriculture. An appended check list accompanies these sources. Dr. Woodward rightly considers the *Diary* of Aaron Leaming, a shrewd and successful Quaker associated with Read for many years, as a most valuable source in appraising Read's character and activities.

The volume is attractive in appearance and remarkably free from error. In every respect it adheres to the best standards of historical craftsmanship.

HARRY J. CARMAN

Columbia University

Investment Management: An Analysis of the Experiences of American Management Investment Trusts. By JOHN A. LOFTUS. ("The Johns Hopkins University Studies in Historical and Political Science," Ser. LIX, No. 1.) Baltimore: Johns Hopkins Press, 1941. Pp. 136. $1.50.

In this monograph the author reports and analyzes the results of his empirical investigations of the efficacy of investment-trust management. Unlike previously published studies of this type—particularly that of the Securities and Exchange Commission—attention here is focused upon a detailed investigation of a limited number of management investment trusts (both mutual and nonmutual) having no senior securities outstanding. Only eleven separate trusts are studied, but these include some of the largest and most prominent in the country, as well as a few of local interest only. Many shades of investment policy and practice concerning diversification, trading, nonsecurity purchases, bond holdings, etc., are represented.

The investment performance of management in each case is measured by the corrected change in asset values of the portfolio between two points of time—usually from the inception of the trust until December 31, 1937—after taking account of the dividends paid in the interim. This is set against the performance of the stock market as a whole. In some cases performance is measured against a hypothetical

fixed trust or against an assumed savings bank account drawing 2 per cent interest. After considerable discussion of valid criteria of comparison, the author selects as his leading measure the ninety stocks of the Standard Statistics Index on December 31, 1937, and computes an index of changes in market values (carefully corrected for dividends paid) of these stocks from 1925 through 1937. From this his yardstick of performance for any interval of time up to 1937 can be determined.

The statistical results of these investigations do not differ greatly from those found in other empirical studies. In general they show that managements were not able to accomplish substantially better investment results than the stock averages, although seven of the eleven trusts "beat the averages." Three out of five did better than hypothetical fixed trusts, and two out of four did better than a savings account drawing 2 per cent interest, where these supplementary tests were used. In only two of the eleven trusts were asset-value indexes as high at the end of 1937 as at the inception of the trusts. One of these two was organized in 1925, the other in 1932.

Although the author lays much stress upon the important point that the investment experience of each trust should be appraised in light of the purpose for which it was organized, he generally finds statements of purpose somewhat general, nebulous, and little amenable to objective measurement; hence his evaluations of management performance run in terms of the standardized criteria mentioned above. On the theoretical side he raises certain questions, such as the inconsistency of trying to combine two investment objectives such as safety (by bonds and cash) and appreciation plus an inflation hedge (by common stocks), in portfolios of trusts issuing a single type of security. He is also critical of portfolio changes that materially disturb the nature of the trust, whether they be moves from stocks to bonds, to cash, or vice versa.

Professor Loftus has approached his problem with objectivity and discrimination. His emphasis upon income as well as capital values, his careful investigation of particular trusts, and his willingness to come to grips with some of the underlying problems that such studies involve, to say nothing of the laborious task of computation, make this a welcome addition to our knowledge of investment trusts and the accomplishments of their managements during a particularly trying period of time.

CHELCIE C. BOSLAND

Brown University

Industrial Banking Companies and Their Credit Practices. By RAYMOND J. SAULNIER. ("Studies in Consumer Instalment Financing," No. 4.) New York: National Bureau of Economic Research, Inc., 1940. Pp. xxi+192. $2.00.

This volume is the fourth in a series of five institutional surveys of agencies having to do with consumer instalment credit inaugurated by the National Bureau of Economic Research in 1938. It contains a factual statement of the historical evolution, legal status, financial structure, services and charges, co-operation and competitive relationships, and present importance of industrial banking companies, defined as "institutions which extend consumer loans, repayable on an instalment basis, and obtain at least part of their working funds from the acceptance of deposits or the sale of investment certificates" (p. 1). In 1938 there were 410 such institutions, extending about $400,000,000 in credit during that year and making their services available to approximately 1,500,000 persons. Although Morris Plan banks and companies accounted for only 94 of the 410 institutions, they had loans outstanding of approximately equal magnitude to those of the 316 industrial banking companies outside the Morris Plan system.

A significant change noted in the financial structure of Morris Plan banking companies is the declining importance of equity accounts (17 per cent in 1937 in contrast to 43 per cent in 1920) and the rising importance of deposits and certificates (72 per cent in 1937 in contrast to 31 per cent in 1920) as a source of loan funds (p. 58). Although the bulk of the lending done is still in the form of co-maker and single-name loans, industrial banking companies have entered other fields as well, sales-finance loans, F.H.A. loans, and even commercial loans attesting to the diversified nature of their lending activities. Morris Plan banks have made a striking earning record, averaging about 10 per cent on total equity account for the period 1922–38. Their earning ratio has been even higher since the great depression than before (p. 163). The chief explanation of this fact is that loans accounted for between two-thirds and three-quarters of total assets during 1934–38, while commercial banks held only between one-quarter and one-third of their assets in that form (p. 71).

While making no pretense at exploring the broader economic implications of consumer credit agencies or of their adequacy in general, Mr. Saulnier has succeeded in making available a part of the information from which these more general conclusions may be drawn.

University of Michigan WILLIAM B. PALMER

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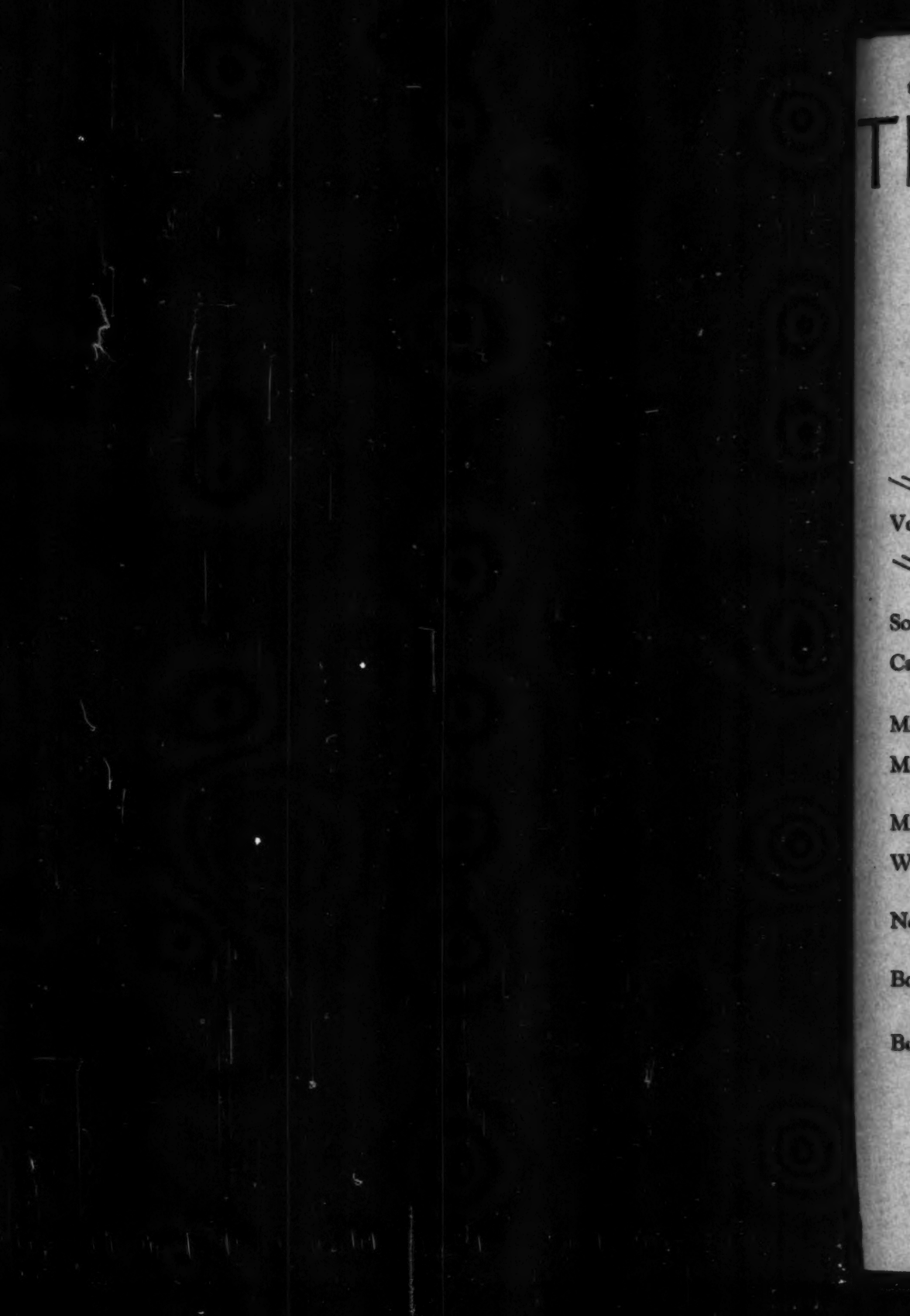

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Capital Theory in a System with No Agents Fixed in Quantity *Everett E. Hagen* 837

Monopoly Supply and Monopsony Demand *A. J. Nichol* 861

Monetary Effects of Wartime Social Security Taxes *Alex. Moses Rosenson* 881

Malthus and Keynes *James J. O'Leary* 901

White Paper on British War Finance, 1938–41 *Richard A. Musgrave* 920

Note on Concentration of Economic Power *Calvin Crumbaker* 934

Book Reviews 945
(See inside front cover)

Books Received 963

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James W. Angell, *Investment and Business Cycles* - - - - - - - MAX F. MILLIKAN 945

Simon Kuznets, assisted by Lillian Epstein and Elizabeth Jenks, *National Income and Its Composition, 1919–1938*, Vols. I and II - - - - - - - - - JULIUS V. WYLER 947

World Organization, a Balance Sheet of the First Great Experiment: A Symposium of the Institute on World Organization - - - - - - - - - - - - PITMAN B. POTTER 949

Maxine Y. Sweezy, *The Structure of the Nazi Economy* - - - - - - - R. TIRANA 952

Philip W. Buck, *The Politics of Mercantilism* - - - - - - - - FRANK H. KNIGHT 952

Rudolf Kaulla, *Theory of the Just Price: A Historical and Critical Study of the Problem of Economic Value* (translated from the German by Robert D. Hogg) FRANK H. KNIGHT 954

John G. B. Hutchins, *The American Maritime Industries and Public Policy, 1789–1914: An Economic History* - - - - - - - - - - - - - - - - - CHESTER W. WRIGHT 956

Carl Raymond Woodward, *Ploughs and Politicks: Charles Read of New Jersey and His Notes on Agriculture, 1715–1774* - - - - - - - - - - - - HARRY J. CARMAN 958

John A. Loftus, *Investment Management: An Analysis of the Experiences of American Management Investment Trusts* - - - - - - - - - - - - - - CHELCIE C. BOSLAND 960

Raymond J. Saulnier, *Industrial Banking Companies and Their Credit Practices* WILLIAM B. PALMER 962

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Price Control in Outline - - - - - - - - - - - - - - *D. D. Humphrey*
Price Freezing under the O.P.A. - - - - - - - - - - - - *Victor Abramson*
Monetary Theory at the Textbook Level - - - - - - - - - - *A. W. Marget*
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Malcolm Bryan

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Robert E. Rapp

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Frank L. Barton

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